Connecticut Rural Health Plan Overview

Introduction
Overview

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History

The CT-SORH (Connecticut State Office of Rural Health) was established in 1994 as the Rural Health Program of the CT DPH (Department of Public Health). In April of 1999, the program moved to offices at Northwestern Connecticut Community College in Winsted. At that time, the name of the office was changed to CT-SORH. Currently, a director and an assistant staff the CT-SORH and work closely with the CT Rural Development Council, DPH and the OHCA (Office of Health Care Access) to improve the delivery of health services for the rural areas of CT. A steering committee has been charged with oversight in the development of a RHP (Rural Health Plan) for CT. The steering committee members are listed in **Figure 1**.

Figure 1: Rural Health Plan Steering Committee Members

Name	Title/Position	Agency
Barbara Berger	Director	CT SORH
Mary Winar	Program Assistant	CT SORH
Colette Anderson	Director	Northwest Mental Health Authority
Linda Cardini	Executive Director	Connecticut Rural Development Council
Ana Chambers	Health Program Associate	CT DPH, Program Support and Contracts Management
Diane Granatuk	Assistant Director of Finance	Connecticut Hospital Association
Patricia Harrity	Executive Director	Northwest Area Health Education Center
Dr. Michael Hofmann	Director	CT DPH, Office of Research and Planning
Julianne Konopka	Director	Connecticut DPH, Program Support and Contracts Management
Michael Meacham	Director	OHCA, Health Systems Development
Robin Rittinger	Case Worker	Congresswoman Nancy Johnson's Office

The grant program funding the development of this RHP is the MRHFP (Medicare Rural Hospital Flexibility Program), which is administered by the federal ORHP (Office of Rural Health Policy). The MRHFP was created by the BBA (Balanced Budget Act) of 1997 as a nationwide program that created a new category of rural hospital—CAH (Critical Access Hospital)—as well as authorizing grant funds to finance the development of rural health delivery systems. One of the requirements for receiving a MRHFP grant is that the state must develop a comprehensive RHP for the delivery of health care services. This document is both an analysis of the health care delivery system in rural CT and an initial RHP for future activities. The chapter following this Overview contains the CT CAH Implementation Plan and application.

State Health Planning Structure

The CT DPH is the lead state agency for public health planning and assists communities in the development of collabor ative health planning activities to address public health issues on a regional basis and respond to public health needs with statewide significance. The department is charged with preparing a multiyear state health plan that will provide an assessment of the health of CT's population and the availability of health facilities.[1]

The CT OHCA, shall (1) "Determine the availability of acute care, long term care and home health care services in private and public institutional and community-based facilities providing diagnostic or therapeutic services for residents of this state; (2) determine the scope of such services; and (3) anticipate future needs for such facilities and services."[2]

The most recent comprehensive state planning tool available is *Looking Toward 2000—An Assessment of Health Status and Health Services,* published by the CT DPH, Office of Policy, Planning and Evaluation.

[1] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 291
[2] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 291

Rural Health Plan Development

The development of the CT RHP builds upon existing needs assessments and community efforts to address local health care needs. The CT RHP is designed to prioritize activities with the intention of improving healthcare delivery systems for residents of rural CT. The plan provides information on existing resources, identifies gaps in services, identifies barriers that limit access to care and provides recommendations for improving the delivery of health care to rural residents.

In 1996, the DPH conducted an assessment of the health care environment in CT in order to prepare a statewide health facilities plan to be incorporated into the CT State Health Plan. The resulting document, *Looking Toward 2000—An Assessment of Health Status and Health Services,* identified the following trends affecting the health care delivery system:

- The penetration of managed care is a major factor in the declining use of acute care facilities.
- Hospital consolidation and mergers and affiliations of a variety of health care institutions are occurring. As a result, hospitals are closing or their services are being limited.
- Utilization of ambulatory surgical centers will continue to increase in importance as more procedures become safe to perform on an outpatient basis. In addition, hours of operation at ambulatory surgical centers are being increased to accommodate demand. Both of these trends will further reduce the use of acute care facilities.
- Home health services will continue to grow as a means of reducing the use of hospitals and nursing homes.
- Increasing emphasis will be placed on preventive services and access to primary care to:
  - Reduce the risk of developing heart disease and cancer
  - Enable people to control chronic conditions such as asthma and diabetes
  - Provide more prenatal care
  - Immunize more completely against infectious diseases
  - Provide health education and wellness programs
- Home nursing care is becoming more desirable for the chronically sick, disabled and elderly.
- There is increasing demand for an integrated service approach to improve case management.
- Consumers' choices in terms of health care practitioners, services or institutions are limited by the insurance plan with which they are enrolled.
- The use of technicians to perform functions previously performed by licensed health care professionals is growing.[3]

Other sources of information included:

- CT EMS (Emergency Medical Services) Plan, January 1997, appendices updated February 1999
- Second Annual CT Community Oral Health Conference, *Conference Proceedings*, July 7, 1999
- Torrington Area Health District Maternal-Child Health Focus Group, *December 7, 1999 Notes*
- Health Status Indicators in CT Rural Towns, The Parisky Group, February 1999
- Nursing Home Facilities Licensed by the CT DPH, May 21, 1999

Several state departments and private agencies provided data and information used in this report and/or assisted with data analysis and interpretation. In particular, staff members of the following organizations and departments were particularly helpful:

- OHCA
- CT Office of Policy, Planning and Evaluation
- CT DPH, Bureau of Regulatory Services
- CT DPH, Bureau of Community Health
- CT DPH, Office of Research and Planning
- Campion Ambulance Service, Inc.
- Mary Alice Lee, PhD, Assistant Director, Children's Health Council

[3] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 220

Identification of Rural Communities

Definition of Rural

One of the first, and most challenging, steps in preparation for the development of the CT RHP was to agree on an appropriate definition of "rural" to be used in identifying the geographic area of CT to be studied. There is no single, generally accepted definition of rural, either in CT or nationally. Rather, there are several classification systems in use by a variety of federal and state programs.[4] Five definitions were considered, as summarized in **Figure 2**. Each definition is discussed in more detail in the following sections.

Figure 2: Definitions of Rural

Definition Source	Definition Summary
U.S. Department of Commerce, Bureau of Census	Defines UAs (urbanized areas) and some "places" outside UA's by population density, using census tracts and census-defined places as building blocks.
OMB (U.S. Office of Management and Budget)	Defines MSAs (Metropolitan Statistical Areas) using counties as the building blocks. All areas outside defined metropolitan counties are considered rural.
Goldsmith Modification	Uses census tracts to identify rural parts of OMB-designated metropolitan counties; also isolates rural areas based on commuting patterns.
Beale Codes	Ranks counties in a continuum by degree of urbanization and proximity to metropolitan areas.
Parisky (Consultants to DPH)	Defines rural as places where at least 75% of the population is classified as non urban by the last census, or towns not designated by OMB as part of an MSA.

[4] CT DPH, Bureau of Community Health, CT Rural Health Program, *Health Status in Connecticut Rural Towns*, prepared by the Parisky Group under contract, February 1999, page 1

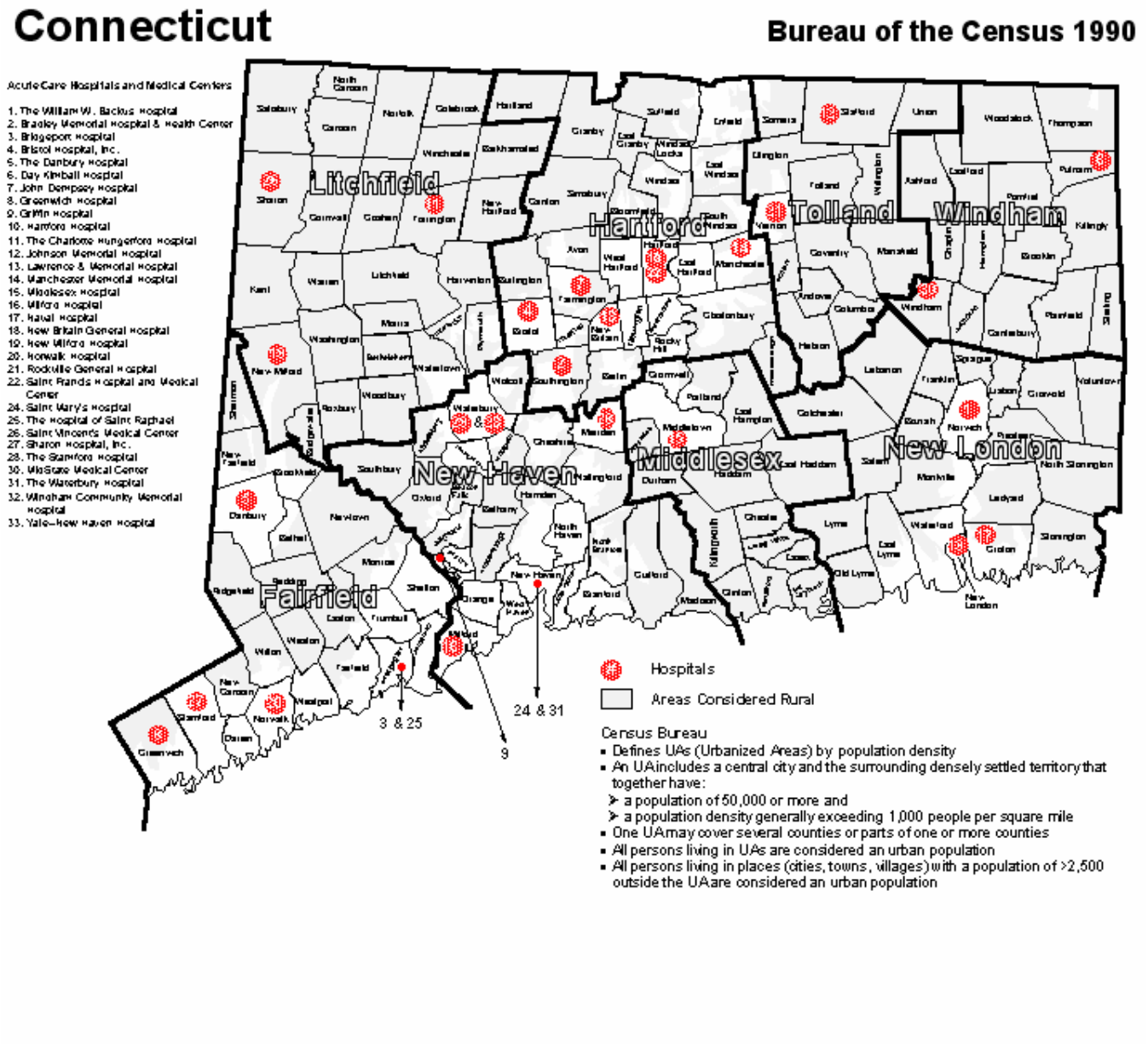
Census Bureau Definition

As its first step in identifying non-rural area, the US Bureau of Census first defines UAs. An UA consists of a central core (city or cities) and the contiguous, densely settled territory (urban fringe) outside the central core that combined have a total of 50,000 people. A densely settled territory is one with a population density of at least 1,000 persons per square mile. The Census further defines urban populations as those people living in UAs plus people living outside UAs in Census-defined "places" with at least 2,500 residents. Places are defined as either:

- Incorporated places such as cities, boroughs, towns and villages, or
- Closely settled population centers that are outside of UAs, do not have corporate limits and have a population of at least 1,000 people

The Bureau of Census considers any area or population outside an UA to be "rural". A map showing CT towns defined as "non urban" based on the Census definition is shown in **Figure 3**.

Figure 3: Map of Census-Defined Non Urban Areas in CT

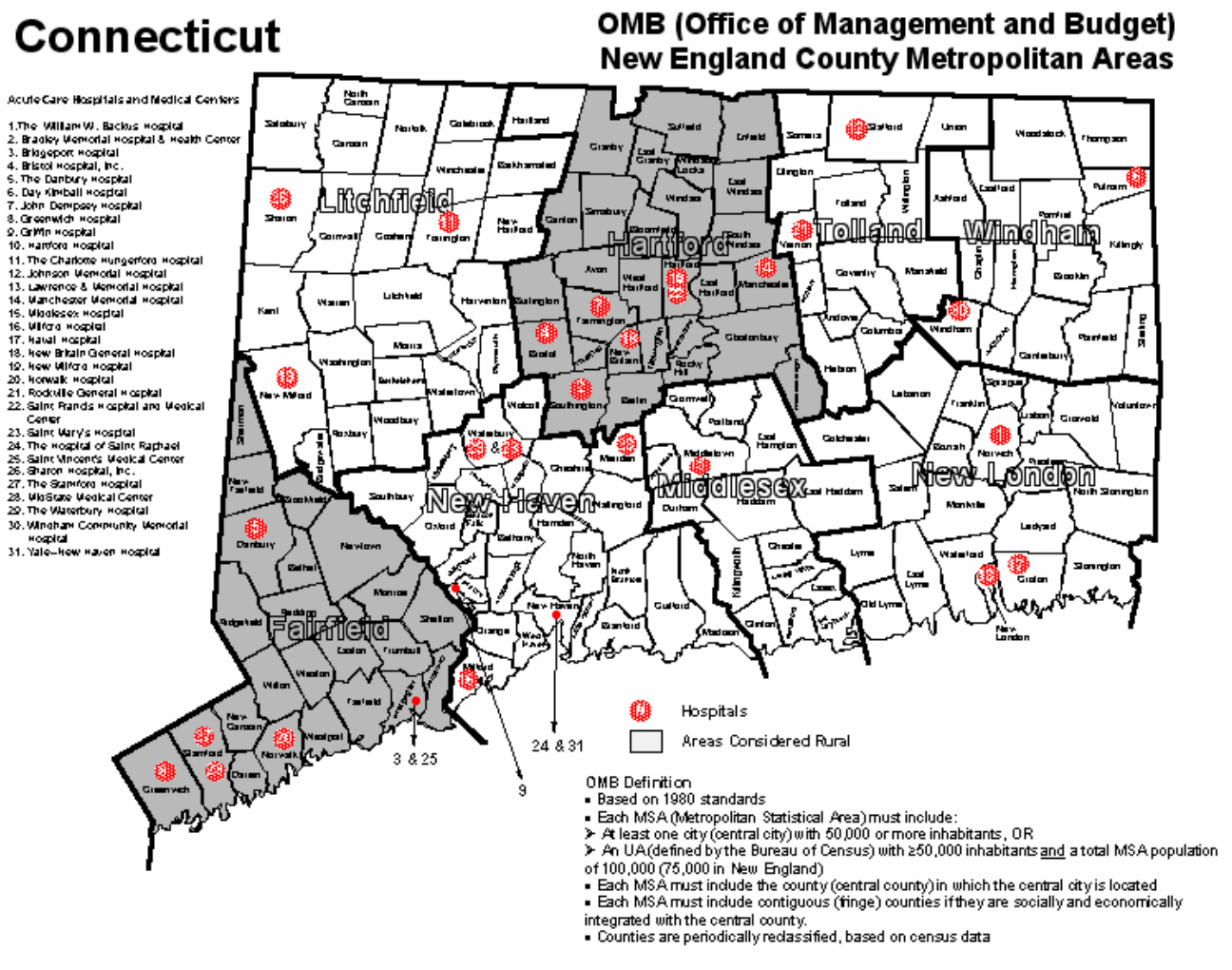


Office of Management and Budget Definition

The OMB defines an MSA as an economically and socially integrated geographic unit centered on a large urban area. An MSA includes a large population center and adjacent communities that have a high degree of economic and social integration with that center. The population center must be either a city with a population of at least 50,000 or an UA recognized by the Bureau of Census with a population of at least 50,000 that is part of a county or counties with a population of at least 100,000 (75,000 in the New England states). Each MSA must contain at least one entire county. Counties that do not meet the definition of metropolitan are "non-metropolitan" or rural.

The federal OMB maintains a list of metropolitan areas nationwide and periodically updates this list based on the latest population estimates from the Bureau of Census. The OMB designation of metropolitan areas, and by exclusion non-metropolitan areas, is the one most used by federal programs providing aid to "rural" residents. OMB classifies six of the eight CT counties as metropolitan. Only Litchfield and Windham Counties are classified as non metropolitan. **Figure 4** displays a map of the CT counties and their designations by OMB.

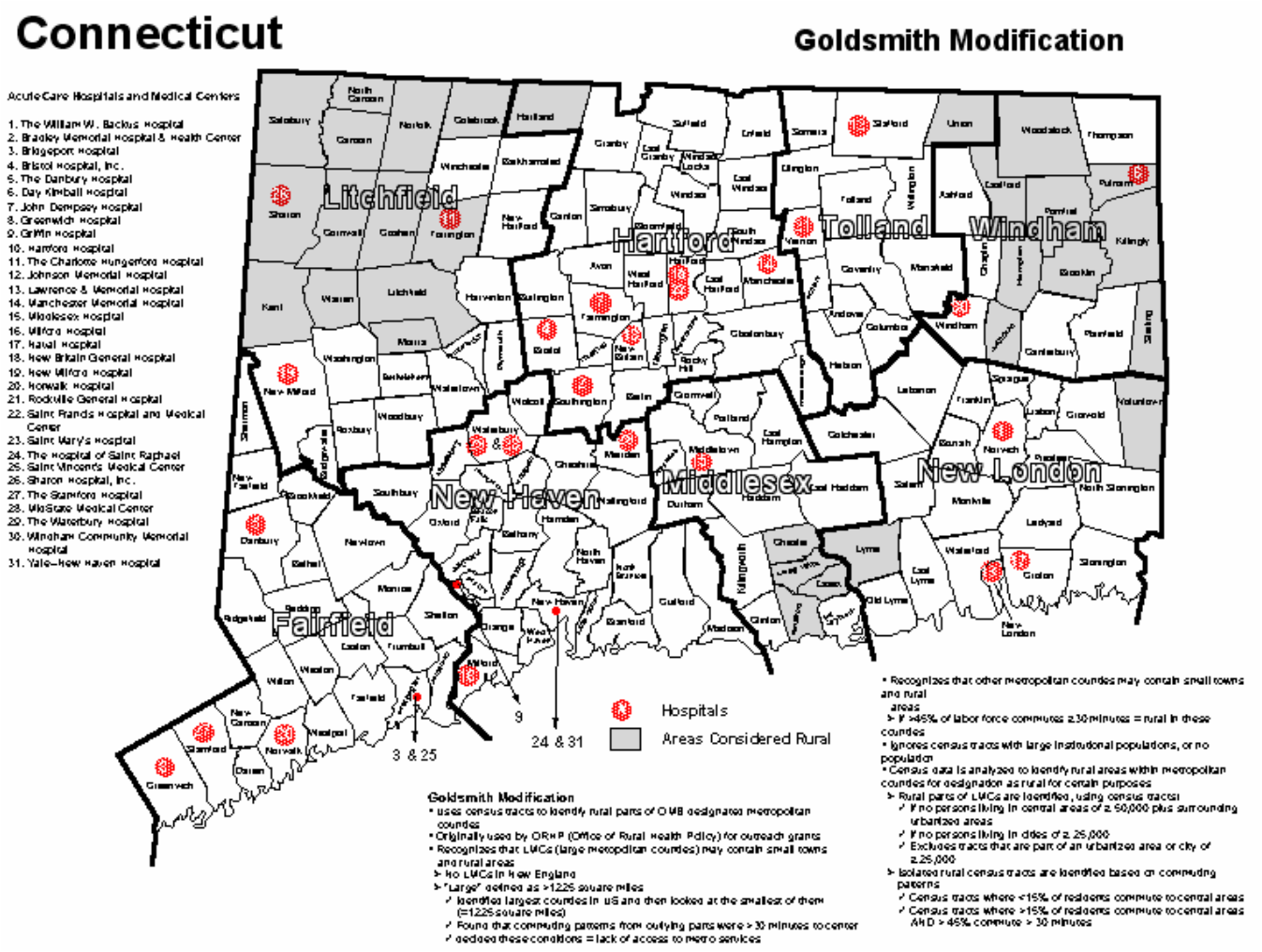
Figure 4: Map of OMB-Defined CT Metropolitan Areas



Goldsmith Modification

A common variation of the OMB definition is the Goldsmith Modification. This modification in its original form does not apply to the New England states because its original use was to identify rural areas within "large" metropolitan counties and New England does not have any counties that are considered large. However, since this modification is used by the federal ORHP to determine the geographic eligibility of applicants for its grant programs, that Office has adopted additional modifications to allow New England states to participate in those programs. A map showing CT towns defined as "rural" based on the Goldsmith Modification (as further modified by federal ORHP) is shown in **Figure 5**.

Figure 5: Map of Goldsmith Modification Non Metropolitan Areas in CT



Beale Codes

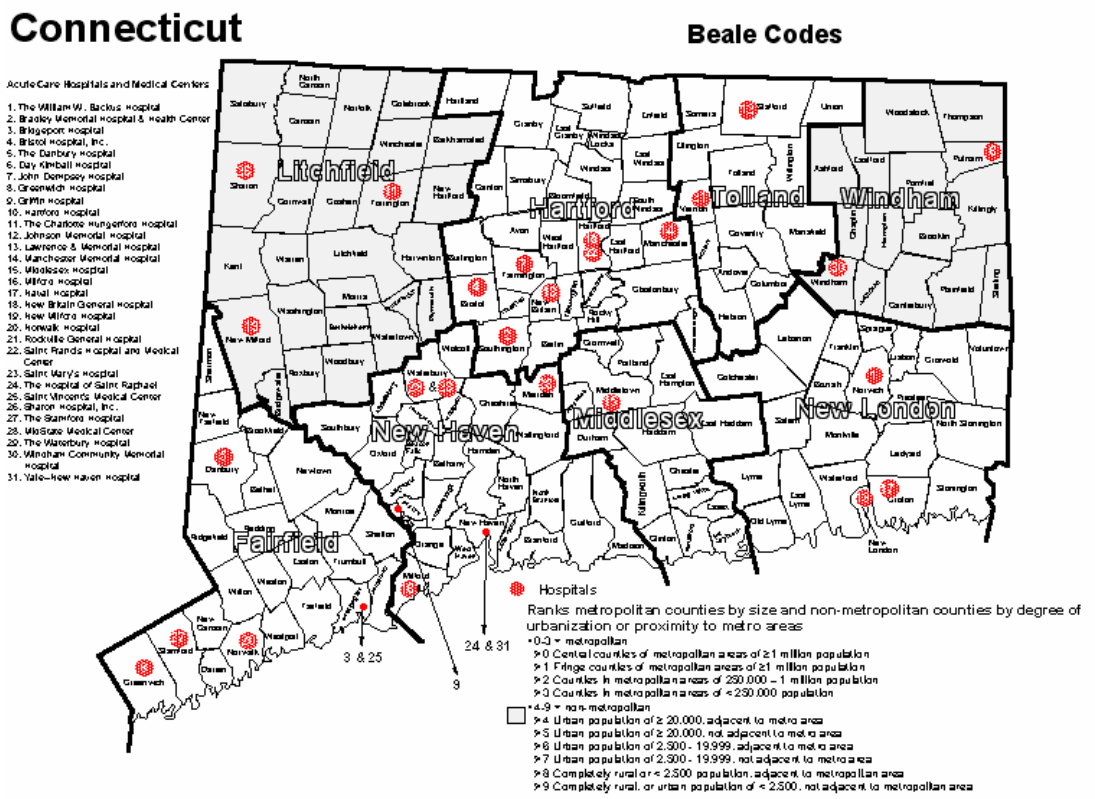
An additional method of identifying rural areas is the use of Beale Codes. Beale Codes were developed by the U.S. Department of Agriculture for use with agricultural programs. The Beale methodology ranks entire counties by size and ranks non-metropolitan counties by degree of urbanization and/or proximity to metropolitan areas. There are three levels of classification for metropolitan counties and six levels of classification for non-metropolitan counties. The codes are summarized in **Figure 6**.

Figure 6: Beale Codes

Codes 0-3 = Metropolitan Counties	
0	Central counties of metropolitan areas with a population of ≥1 million
1	Fringe counties of metropolitan areas with a population of ≥1 million
2	Counties in metropolitan areas with a population of 250,000 – 1 million
3	Counties in metropolitan areas with a population of < 250,000
Codes 4-9 = Non Metropolitan Counties	
4	Urban population of ≥ 20,000 and adjacent to a metropolitan area
5	Urban population of ≥ 20,000 and not adjacent to a metropolitan area
6	Urban population of 2,500 - 19,999 and adjacent to a metropolitan area
7	Urban population of 2,500 - 19,999 and not adjacent to a metropolitan area
8	Completely rural or < 2,500 population and adjacent to a metropolitan area
9	Completely rural, or urban population of < 2,500 and not adjacent to a metropolitan area

A map showing CT towns defined as "rural" based on the Beale Code definition is shown in **Figure 7**.

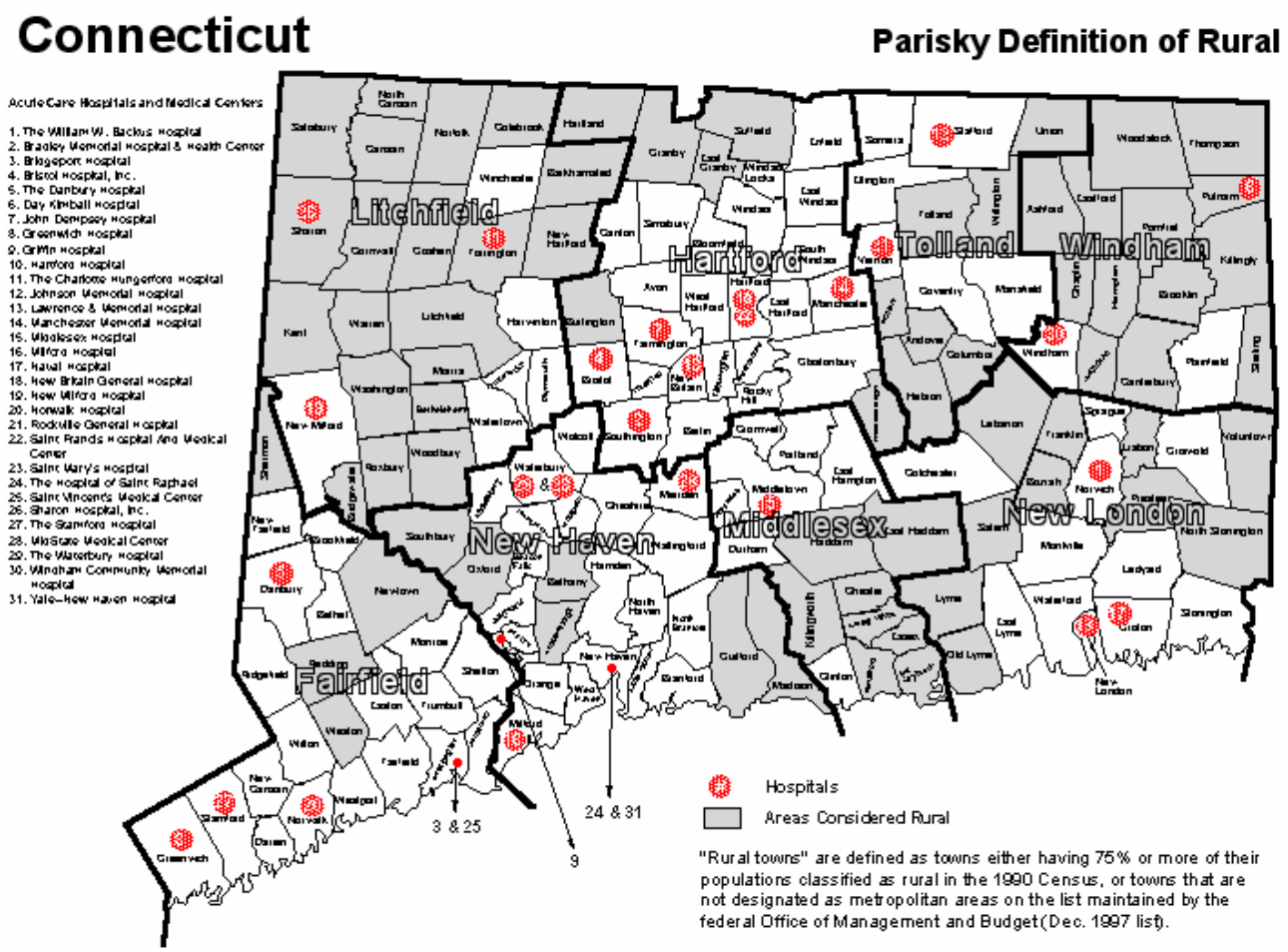
Figure 7: Map of Beale Code-Defined Rural Areas in CT



Parisky Definition

The Parisky definition combines both the Bureau of Census and the OMB methods. The Parisky definition of a rural area is one that the Bureau of Census has identified as at least 75% non urban or that OMB has not included in an MSA. A map showing CT towns defined as "rural" based on the Parisky definition is shown in **Figure 8**.

Figure 8: Map of Parisky-Defined Rural Areas in CT



The RHP Steering Committee reviewed the maps shown above, and the associated definitions. The Bureau of Census definition was considered too broad in its inclusion of towns that are considered, and that consider themselves, urban. The Bureau of Census also splits towns by census tract, an approach which would create data skewing due to the need to divide town populations and pro rate indicators for small population groups. The OMB definition conversely excluded all of CT except Litchfield and Windham Counties by classifying the other six counties as metropolitan areas. The Goldsmith modification excluded many towns that are locally defined as rural. The Beale Code definition excluded all of CT except Litchfield and Windham Counties. The RHP Steering Committee concluded that the Parisky definition was the most appropriate for use with the CT RHP. The BBRA (Balanced Budget Refinement Act) of 1999 allows state specific definitions of rural for purposes of the Medicare Rural Hospital Flexibility Critical Access Hospital Program.

"Rural towns" are defined as towns with either 75% or more of their populations classified as non urban in the 1990 Census or towns that are not designated as metropolitan areas on the December 1997 OMB list.

Use of the Parisky definition of rural resulted in the identification of 74 of CT's 169 towns as rural.

Identification of Analysis Areas

After identifying the towns to be studied, the towns were grouped into "analysis areas".

The CT OPM (Office of Policy and Management) has developed USRs (Uniform Service Regions) based upon criteria such as size, population distribution, facility locations, transportation accessibility, federal requirements and existing regional cooperative efforts. USRs were created for planning the distribution of funds and services related to health and human services. However, the CT-SORH determined that smaller clusters of communities could best represent the health care use patterns of rural sections of the state.

Counties were not considered an appropriate clustering of communities because CT counties cover large geographic areas and contain both urban and rural populations and areas. For example, New London County includes the city of Norwich, but also has several small towns, such as Voluntown, that are truly rural in nature.

Given the constraints of each of these methods of clustering communities, a unique grouping of communities was developed for this study. The CT-SORH performed the initial clustering based on known patterns of local health care use. Each analysis area is centered on the hospital most used by residents of the rural communities in that area. This clustering was reviewed and approved by the RHP Steering Committee. The analysis areas were named: Middletown, New Milford, Norwich, Oxford, Putnam, Redding, Sharon, Torrington and Windham.

During the focus group sessions, some participants in some areas questioned the inclusion or exclusion of certain towns from their analysis area. Modifications to the clustering were considered based on these comments. This consideration was then tested by a review of hospital discharge data. This review precipitated changes in the initial effort. Further consideration was given to splitting specific town populations into more than one analysis area, based on hospital discharge data. However, this strategy was not pursued, based on the concern that many data elements are reported at the town level, and that dividing the town population, and subsequently prorating the data elements, would cause inappropriate skewing of the results.

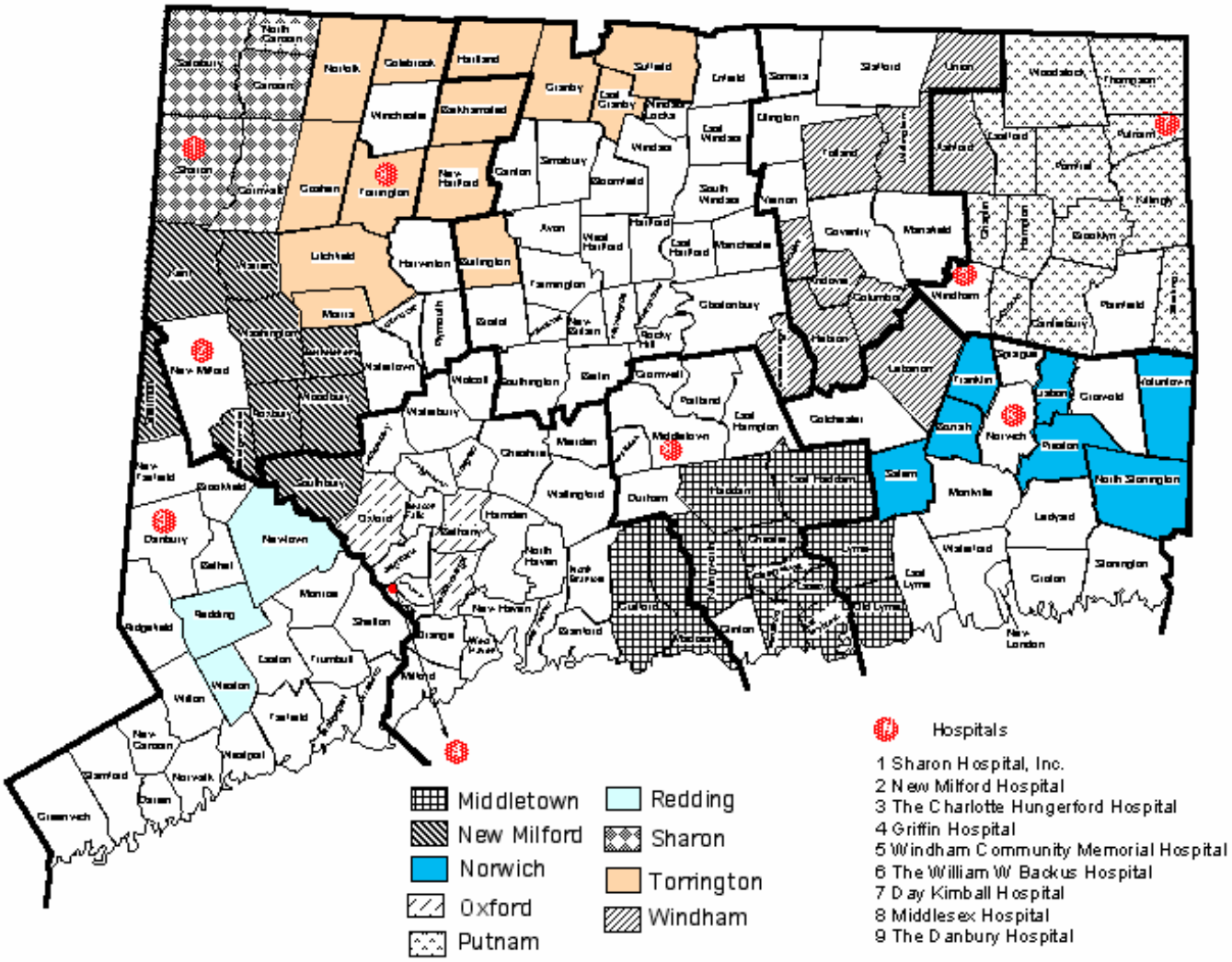
The final analysis areas and the towns included in each area are listed in **Figure 9**.

Figure 9: Analysis Area Towns

Analysis Area Number	Analysis Area Name	Analysis Area Towns	Number of Analysis Area Towns
1	Middletown	Chester, Deep River, East Haddam, Essex, Guilford, Haddam, Killingworth, Lyme, Madison, Old Lyme, Old Saybrook, Westbrook	12
2	New Milford	Bethlehem, Bridgewater, Kent, Roxbury, Sherman, Southbury, Warren, Washington, Woodbury	9
3	Norwich	Bozrah, Franklin, Lisbon, North Stonington, Preston, Salem, Voluntown	7
4	Oxford	Bethany, Oxford, Woodbridge	3
5	Putnam	Brooklyn, Canterbury, Chaplin, Eastford, Hampton, Killingly, Pomfret, Putnam, Scotland, Sterling, Thompson, Woodstock	12
6	Redding	Newtown, Redding, Weston	3
7	Sharon	Canaan, Cornwall, North Canaan, Salisbury, Sharon	5
8	Torrington	Barkhamsted, Burlington, Colebrook, East Granby, Goshen, Granby, Hartland, Litchfield, Morris, New Hartford, Norfolk, Suffield, Torrington	13
9	Windham	Andover, Ashford, Bolton, Columbia, Hebron, Lebanon, Marlborough, Tolland, Union, Willington	10

Figure 10 displays the rural analysis areas, the towns included in each and their relationship to the CT.

Figure 10: Analysis Areas Map



Needs Assessment

After defining rural and grouping communities into analysis areas, the next step in the development of the CT RHP was to conduct a needs assessment for each of the analysis areas. Demographics, provider supply, facility supply, various health status indicators and other community data were collected and analyzed.

After collecting and analyzing demographic and resource information for each analysis area, findings and recommendations were identified and summarized in each chapter of this report. The analysis, findings and recommendations combine to form the CT RHP. While each analysis area is unique in terms of its health care delivery needs and resources, commonalities exist and are summarized in the *Findings and Recommendations* section of this document, beginning with findings on **page 57** and recommendations on **page 60**.

Federally Designated Shortage Areas

Federal shortage designations provide a variety of resources to improve access to care through selected types of safety net providers and programs. The designations are made by the federal Division of Shortage Designation and are used for several federal and state programs. There are two types of shortage designations, HPSA/HPSP (Health Professional Shortage Area/Health Professional Shortage Population) and MUA/MUP (Medically Underserved Areas/Medically Underserved Populations). Further, HPSAs and HPSPs can be designated as suffering from shortages of primary care, mental health or dental services. All types of shortage designations are identified through formulas applied either to the entire population of the area or to a specified population, such as low income residents, within the area.

As part of conducting the Needs Assessment, current and potential shortage area designations were reviewed. This review of shortage areas is important for two reasons. First, it is an important element in the development of networking strategies because of the availability of enhanced reimbursement for providers serving underserved areas and/or populations. Second, proposed changes in the requirements will put areas designated under the old rules at risk of losing both underserved status and the benefits derived from that status. This risk will affect the ability of local areas to recruit qualified providers and to finance the delivery of health care, especially to low income and uninsured residents. **Figure 11** summarizes the uses of federal shortage designations.

Figure 11: Shortage Designation Uses

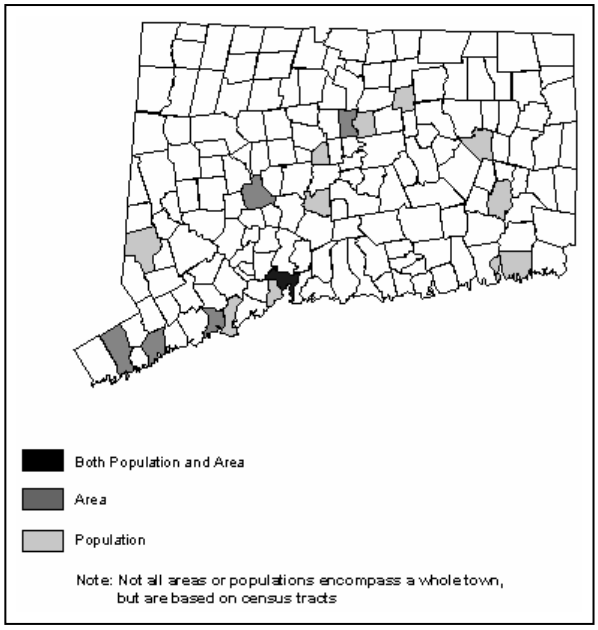
Program	HPSA	HPSP	MUA	MUP
Eligibility for Community, Migrant, and/or Homeless Health Center Grant Funding/Automatic FQHC Status	N/A	N/A	X	X
FQHC Look Alike Status	N/A	N/A	X	X
RHC (Rural Health Clinic) Status	X	X	X	N/A
Placement of NHSC (National Health Service Corp) Providers	X	X	N/A	N/A
Medicare Bonus Payments	X	N/A	N/A	N/A
State and Federal Incentive Loan Programs	X	X	N/A	N/A
Funding Preference for HRSA Bureau of Health Professions Training Programs	X	X	X	X
Special Consideration for AHEC Programs Serving Shortage Areas with High Percentages of Under-Served Minorities	X	X	X	X
Funding Priority for AHEC Programs Providing Substantial Training Experience in Shortage Areas	X	X	X	X
Placement of Physicians with J-1 Visa Waivers	X	X	X	N/A
Federal Employee Benefits Program for Non-physician Services in States with High Percentages of residents in HPSAs	X	N/A	N/A	N/A

Source: Health Resources and Services Administration

Although CT has a reported high physician per capita total, it has a number of regions that are designated as HPSAs for primary medical care. A HPSA is an area designated by the federal Secretary of Health and Human Services, under authority of Section 332 of the Public Health Service Act, as having an inadequate supply of health care providers. HPSA designations for primary medical care may be made if it can be demonstrated that (1) the area meets the HPSA criteria as a rational service area for the delivery of primary medical care services; (2) access barriers exist that prevent population groups from using the area's primary medical care providers; and (3) the ratio of the number of persons in a population group to the number of primary care physicians practicing in the area is at least 3,500 to 1.

Various portions of CT towns are federally designated as experiencing shortages of health care resources. Most of these areas are designated as primary care shortage areas, although there are some mental health and dental shortage areas.

Figure 12: Health Professional Shortage Area/Population Map

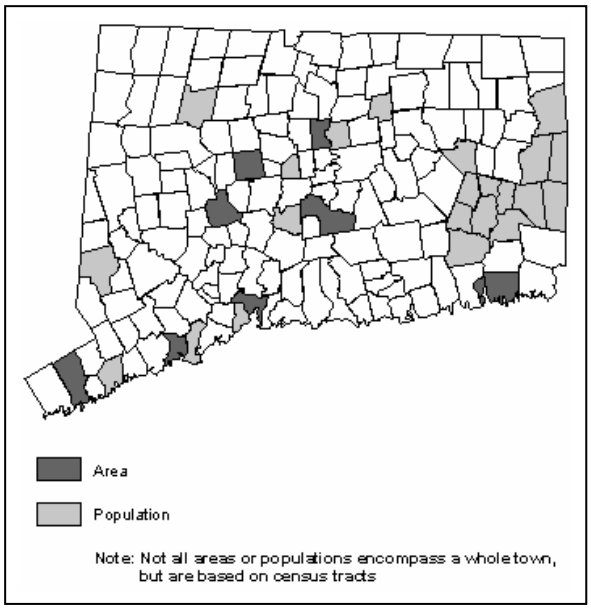


Source: Bureau of Primary Health Care, Health Professional Shortage Area Database, October 6, 2000

The areas of CT that are currently designated as primary care HPSA/HPSPs are shown in **Figure 12**.

The areas of CT that are currently designated as primary care MUA/MUPs are shown in **Figure 13**.

Figure 13: Medically Underserved Area/Population Map



Source: Bureau of Primary Health Care, Health Professional Shortage Area Database, October 6, 2000

Mental Health Shortage Areas

In order to obtain a mental health shortage designation for any of the analysis areas or for a specific population group, detailed information on the number of psychiatrists and other mental health professionals actually offering services to some or all of the public in each community would be required.

In general, an area may be designated if:

- The ratio of total core mental health professional FTEs to the specified population is higher than 1:9,000 or
- The ratio of total psychiatrist FTEs to the specified population is higher than 1:30,000 or
- The ratio of total core mental health professional FTEs to the specified population is higher than 1:6,000 and the ratio of total psychiatrist FTEs to the specified population is higher than 1:20,000
- Core mental health professionals include psychiatrists, clinical psychologists, clinical social workers, psychiatric nurse specialists, marriage therapists and family therapists.

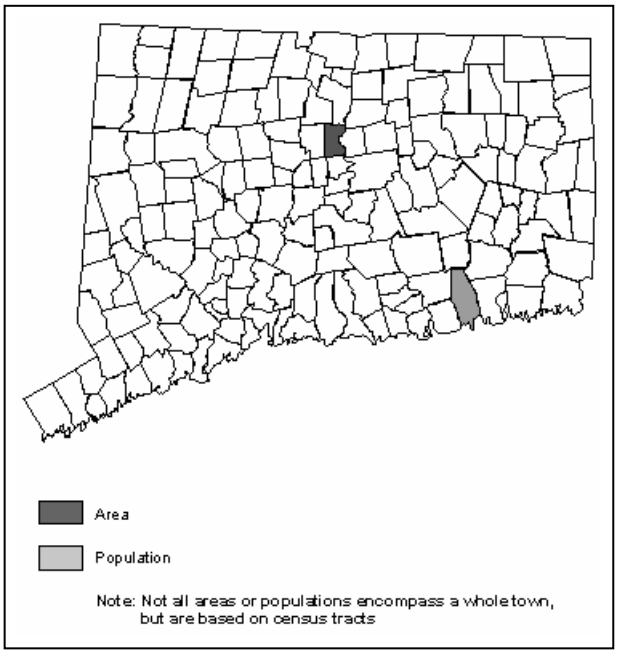
In general, a population may be designated if:

- The ratio of total core mental health professional FTEs to the specified population is higher than 1:6,000 or
- The ratio of total psychiatrist FTEs to the specified population is higher than 1:20,000 or
- The ratio of total core mental health professional FTEs to the specified population is higher than 1:4,500 and the ratio of total psychiatrist FTEs to the specified population is higher than 1:15,000

These baseline ratios may be adjusted due to documented unusual need for mental health services in an area. Unusually high need may result from high levels of alcoholism or drug use within the total population or a specified group within that population. The supply of mental health professionals in contiguous areas is also taken into account for both area and population designations.

The currently designated Mental Health Shortage Areas and Populations in CT are shown in **Figure 14**.

Figure 14: Mental Health Shortage Areas



Source: Bureau of Primary Health Care, Health Professional Shortage Area Database, October 6, 2000

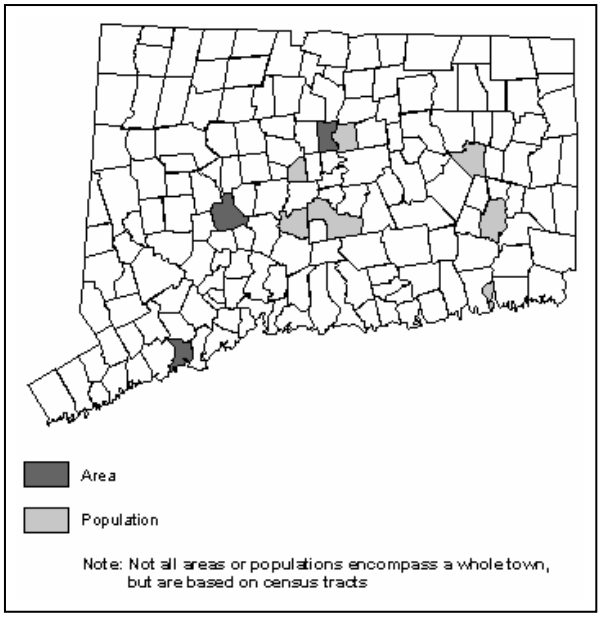
Dental Shortage Areas

In order to obtain a dental shortage designation for an analysis area or for a specific population group, more detail on the number of dentists, dentist productivity, appointment waiting times, whether dentists are accepting new patients and water supply fluoridation would be required. In addition, the actual FTE (full time equivalent) of each dentist is adjusted for both the age of the dentist and the number of auxiliary personnel working in his/her office. In general, an area may be designated if the ratio of adjusted total dentist FTEs to the population is higher than 1:5,000. A population may be designated if the ratio of adjusted total dentist FTEs to the specified population is higher than 1:4,000 and access barriers prevent that population from utilizing the services of the area's dental providers. The supply of dentists in contiguous areas is also taken into account for both area and population designations. FTEs are determined through a survey of area dentists to identify the hours each dentist works, the age of each dentist and the number of additional personnel working in each office.

Dental shortage areas are used primarily for placement of dentists through the NHSC.

The existing Dental Shortage Areas and Populations in CT are shown in **Figure 15**.

Figure 15: Dental Health Shortage Areas



Source: Bureau of Primary Health Care, Health Professional Shortage Area Database, October 6, 2000

Resource Directory Development

Paralleling the Needs Assessment research was the development of a *Resource Directory*. In order to approximate resources necessary to meet the identified needs, health care providers were identified as serving in one of 14 potential categories paralleling the categories of services surveyed with focus group participants and included as chapter sections in this report: Primary Care, Prenatal Care, Obstetrical Services, Public Health Services, Mental Health Services, Dental Care, Home Health Services, Physician Specialty Services, Physical Therapy, Acute Care (Inpatient Hospital Care), ED (Emergency Department) Services, Emergency Ambulance Transportation, Non-emergency Transportation and Long Term Care.

Lists from existing data sources such as professional association membership lists, the 2000 AHA (American Hospital Association) *Guide*, the CT licensure database, *Nursing Home Facilities Licensed by the CT* and a commercial database, *Folio's Medical Directories* were used to obtain the most current information on the various types of providers practicing in each analysis area. The *Resource Directory* has been bound under separate cover and provided to the CT-SORH.

Overview
Demographic Data

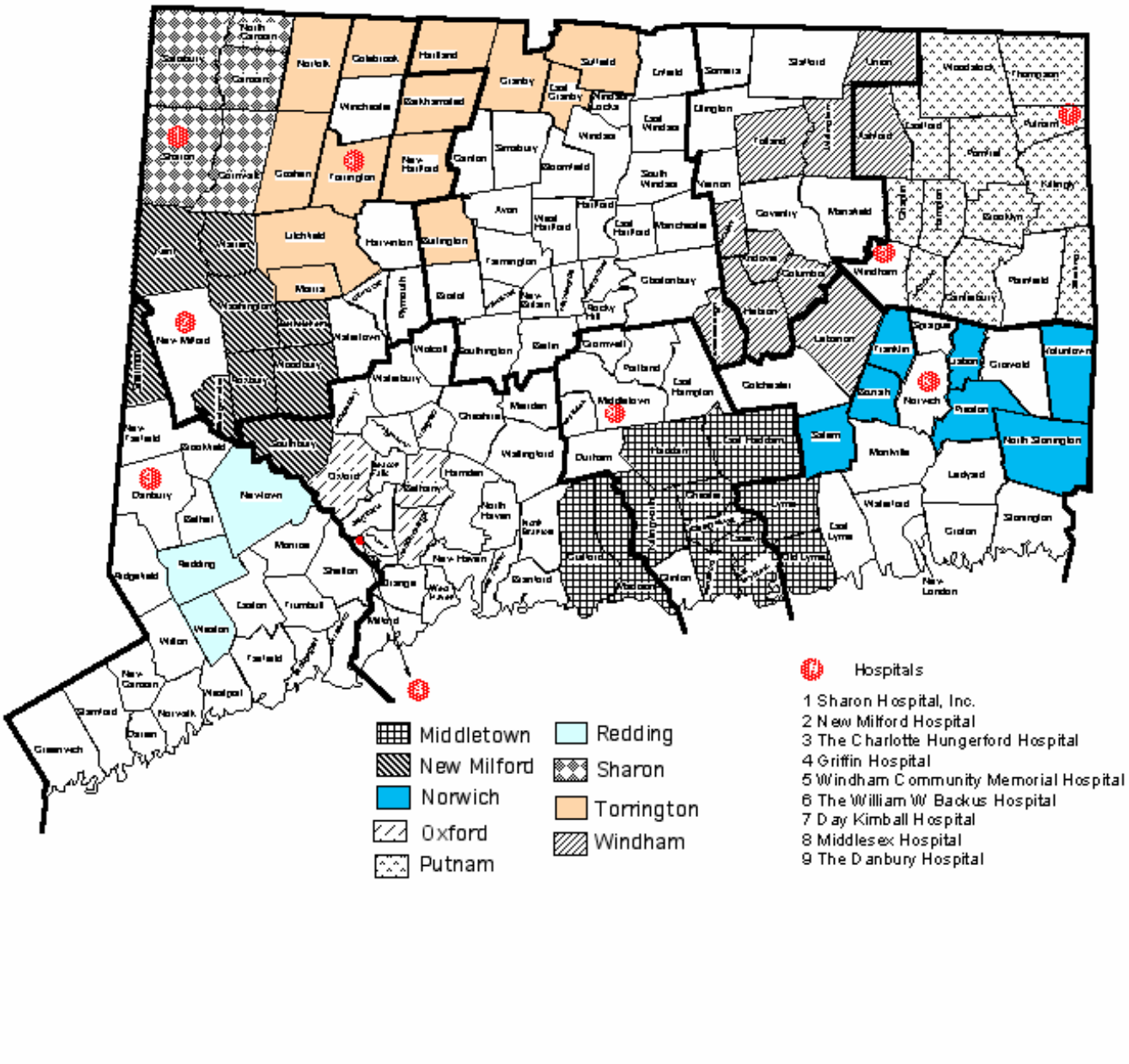
Combined Analysis Area Demographic Data

Analysis Area

There are nine separate rural analysis areas studied for this report. The towns included in each analysis area were chosen for inclusion because at least 75% of the total residents were classified as rural by the 1990 Census and the towns are not designated by the OMB as metropolitan areas. Information on the process used to define the individual analysis areas may be found in the Introduction, beginning on **page 3**, and in the individual chapters of this document, each of which covers one analysis area. This section summarizes findings for the combined analysis area.

The analysis areas, towns included in each and locations relative to CT are illustrated in **Figure 16**.

Figure 16: Map of Combined Analysis Area



Population

The total population of each individual analysis area and the combined total population are shown in **Figure 17**. The total 1998-1999 population of the combined analysis area was 455,727. The combined rural analysis area represents 14% of the total CT population.

The population of each town, the population of each analysis area and the total rural population studied are shown in **Figure 18, on the following page**.

Figure 17: Total Population of Each Analysis Area

Analysis Area	1998-1999 Population
Middletown	94,994
New Milford	43,702
Norwich	24,212
Oxford	22,012
Putnam	65,112
Redding	40,161
Sharon	13,150
Torrington	96,082
Windham	56,302
Combined Analysis Area	**455,727**
1999 CT Population	**3,271,239**
Analysis Area as % of CT	**14%**

Source: CT Department of Economic and Community Development, Town Profiles 1998-1999

Figure 18: Population of Analysis Areas by Town

Analysis Area Name	Analysis Area Towns	Population
Middletown	Chester	3,836
	Deep River	4,461
	East Haddam	7,466
	Essex	6,175
	Guilford	20,065
	Haddam	7,219
	Killingworth	5,628
	Lyme	2,040
	Madison	16,184
	Old Lyme	6,629
	Old Saybrook	9,713
	Westbrook	5,578
Middletown Analysis Area Total		**94,994**
New Milford	Bethlehem	3,292
	Bridgewater	1,756
	Kent	3,095
	Roxbury	2,025
	Sherman	2,997
	Southbury	16,515
	Warren	1,306
	Washington	4,096
	Woodbury	8,620
New Milford Analysis Area Total		**43,702**
Norwich	Bozrah	2,380
	Franklin	1,827
	Lisbon	3,981
	North Stonington	5,042
	Preston	5,025
	Salem	3,666
	Voluntown	2,291
Norwich Analysis Area Total		**24,212**
Oxford	Bethany	4,795
	Oxford	9,151
	Woodbridge	8,066
Oxford Analysis Area Total		**22,012**
Putnam	Brooklyn	6,981
	Canterbury	4,651
	Chaplin	2,241
	Eastford	1,439
	Hampton	1,594
	Killingly	16,092
	Pomfret	3,391
	Putnam	8,890
	Scotland	1,441
	Sterling	2,804
	Thompson	9,031
	Woodstock	6,557
Putnam Analysis Area Total		**65,112**

Analysis Area Name	Analysis Area Towns	Population
Redding	Newtown	23,182
	Redding	8,123
	Weston	8,856
Redding Analysis Area Total		**40,161**
Sharon	Canaan	1,054
	Cornwall	1,501
	North Canaan	3,496
	Salisbury	4,120
	Sharon	2,979
Sharon Analysis Area Total		**13,150**
Torrington	Barkhamsted	3,526
	Burlington	7,892
	Colebrook	1,426
	East Granby	4,423
	Goshen	2,457
	Granby	9,609
	Hartland	1,953
	Litchfield	8,656
	Morris	2,117
	New Hartford	6,145
	Norfolk	2,033
	Suffield	11,157
	Torrington	34,688
Torrington Analysis Area Total		**96,082**
Windham	Andover	2,821
	Ashford	3,934
	Bolton	4,796
	Columbia	4,925
	Hebron	8,115
	Lebanon	6,491
	Marlborough	5,706
	Tolland	12,568
	Union	686
	Willington	6,260
Windham Analysis Area Total		**56,302**
Combined Analysis Area total		**455,727**

Source: CT Department of Economic and Community Development, Town Profiles 1998-1999

Age

The 1998-1999 population distributed by age for the combined analysis area is shown in **Figure 19**.

Figure 19: Combined Analysis Area Population by Age

Analysis Area	<18	18-24	25-64	65+	Total 1998-1999
Middletown	21,132	7,216	52,131	14,515	94,994
New Milford	9,092	3,040	23,270	8,300	43,702
Norwich	5,840	2,070	13,456	2,846	24,212
Oxford	5,525	1,849	11,801	2,837	22,012
Putnam	16,150	5,480	34,219	9,263	65,112
Redding	9,792	3,287	22,721	4,361	40,161
Sharon	2,783	802	6,834	2,731	13,150
Torrington	23,124	7,080	51,940	13,938	96,082
Windham	14,636	4,817	32,034	4,815	56,302
Combined Analysis Area Total	**108,074**	**35,641**	**248,406**	**63,606**	**455,727**
Combine Analysis Area Percent	**24%**	**8%**	**54%**	**14%**	**100%**
Connecticut	766,519	280,101	1,757,021	467,598	3,271,239
Connecticut Percent	23%	9%	54%	14%	100%

Source: CT Department of Economic and Community Development, Town Profiles 1998-1999

As shown in **Figure 20**, the distribution of residents by age group within the analysis area is similar to the statewide distribution. The percentage of individuals in the pediatric group is higher than statewide, while the percentage of young adults is lower than statewide. The percentages of individuals in the adult and elderly groups are the same as statewide.

While the total CT population is projected to increase by 9.3% from 1995 to 2020, the segment of the population aged 65 and older is predicted to increase by 34.8%.[5]

Figure 20: Population Percent by Age Group

Age Group	Analysis Area	Connecticut
Pediatric (<18)	24%	23%
Young Adult (18-24)	8%	9%
Adult (25-64)	54%	54%
Elderly (65+)	14%	14%
Combined Analysis Area	**100%**	**100%**

Source: CT Department of Economic and Community Development, Town Profiles 1998-1999

[5] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 82

Ethnicity

CT's population is fairly homogeneous and the combined rural analysis area is even more so. In 1998-1999, 81% of the statewide population was Caucasian. However, in the combined analysis areas, that figure was 96.1%. **Figure 21** displays a summary of the ethnic composition of each analysis area and of the combined area. The combined analysis area has a significantly lower concentration of African Americans, with 0.9% compared to 8.4% statewide, and Hispanics, with 1.4% compared to 8.1% statewide. The concentration of American Indians/Eskimos is the same in the analysis area and statewide, with both at .2%. The Asian population of the state is 2.2%, while Asians in the combined analysis area represent 1.3%.

Figure 21: Combined Analysis Area Population by Ethnicity

Town Name	Caucasian	African American	American Indian/ Eskimo	Asian/ Pacific Islander	Other Non Hispanic	Hispanic All Races	Total
Middletown	91,611	724	128	1,044	67	1,420	94,994
New Milford	42,173	254	92	550	15	618	43,702
Norwich	23,327	210	86	235	16	338	24,212
Oxford	20,736	262	38	582	23	371	22,012
Putnam	62,832	430	239	648	53	910	65,112
Redding	38,130	363	48	809	15	796	40,161
Sharon	12,700	196	16	111	8	119	13,150
Torrington	92,388	1,159	134	1,276	55	1,070	96,082
Windham	54,154	520	119	608	20	881	56,302
Combined Analysis Area Total	**438,051**	**4,118**	**900**	**5,863**	**272**	**6,523**	**455,727**
Combined Analysis Area Percent	96.1%	0.9%	0.2%	1.3%	0.1%	1.4%	100%
CT	2,648,212	274,213	5,952	73,304	5,336	264,222	3,271,239
Connecticut Percent	81.0%	8.4%	0.2%	2.2%	0.2%	8.1%	100%

Source: CT Department of Economic and Community Development, Town Profiles 1998-1999

Economic Issues

Figure 22: Combined Analysis Area Median Household Income

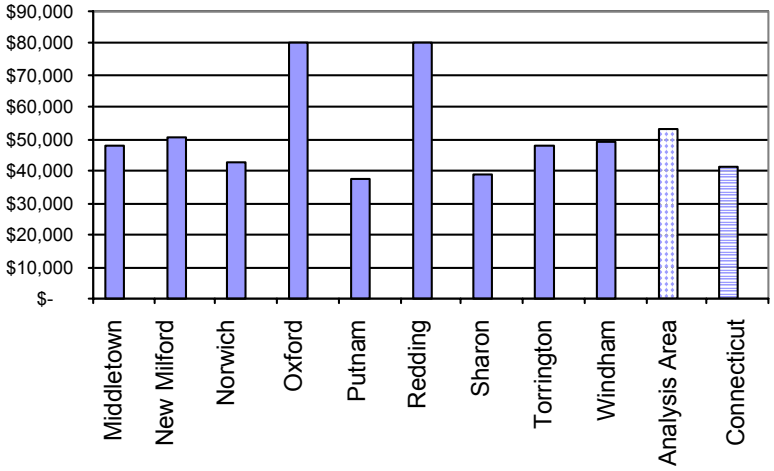
Analysis Area	Median Household Income	Percent of CT Median Income
Middletown	$47,977	**115%**
New Milford	$50,744	**122%**
Norwich	$42,628	**102%**
Oxford	$80,548	**193%**
Putnam	$37,646	90%
Redding	$80,548	**193%**
Sharon	$38,690	93%
Torrington	$48,023	**115%**
Windham	$49,379	**118%**
Combined Analysis Area	**$52,909**	**127%**
Connecticut	$41,721	100%

Source: 1990 Census

Median Household Income

As shown in **Figure 22** and **Figure 23**, the overall median household income is higher than the state median income in the combined analysis area and in each of the individual analysis areas except Putnam and Sharon. However, many of the analysis area towns have median income levels below the statewide figure. Please refer to the respective chapters of this document for median income by town.

Figure 23: Median Household Income



Low Income Population

Figure 24 shows the distribution of analysis area residents by individual incomes in relation to the FPL. Within the combined analysis area, there were 46,629 low income individuals.

Figure 24: Combined Analysis Area Low Income Population

Area	Population <100% FPL	Population 100-149% FPL	Population 150-199% FPL	Total Low Income Population	Population >200% FPL	Total Population for Poverty Determination
Middletown	2,372	2,122	3,673	8,167	81,308	89,475
New Milford	1,313	924	1,267	3,504	36,459	39,963
Norwich	727	469	1,281	2,477	20,035	22,512
Oxford	450	562	560	1,572	19,600	21,172
Putnam	3,786	3,321	5,207	12,314	48,886	61,200
Redding	897	630	659	2,186	34,312	36,498
Sharon	707	486	787	1,980	10,551	12,531
Torrington	3,204	3,022	3,654	9,880	81,673	91,553
Windham	1,615	1,545	1,627	4,787	46,568	51,355
Combined Analysis Area	**15,071**	**13,081**	**18,715**	**46,869**	**379,392**	**426,259**
Connecticut	217,347	136,470	165,271	519,088	2,669,037	3,188,125

Source: 1990 Census

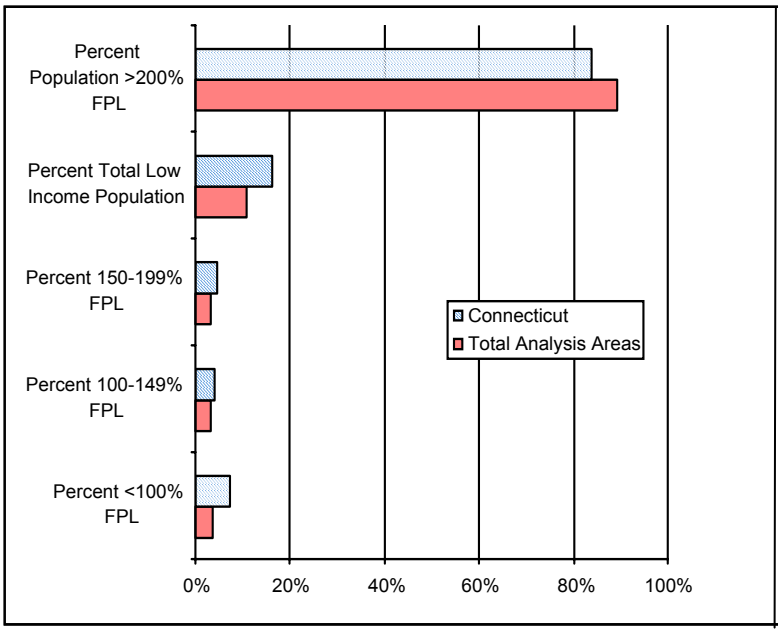
Figure 25: Combined Analysis Area Low Income Population Percent

Area	Percent <100% FPL	Percent 100-149% FPL	Percent 150-199% FPL	Percent Total Low Income Population	Percent Population >200% FPL
Middletown	3%	2%	4%	9%	91%
New Milford	3%	2%	3%	8%	92%
Norwich	3%	2%	6%	11%	89%
Oxford	2%	3%	3%	8%	92%
Putnam	6%	5%	9%	20%	80%
Redding	2%	2%	2%	6%	94%
Sharon	6%	4%	6%	16%	84%
Torrington	3%	3%	4%	10%	90%
Windham	3%	3%	3%	9%	91%
Combined Analysis Area	**4%**	**3%**	**4%**	**11%**	**89%**
Connecticut	7%	4%	5%	16%	84%

Source: 1990 Census

The combined analysis area has a rate of poverty that is lower than the statewide rate, as shown in **Figure 25** and **Figure 26**. The percentage of the combined analysis area population with low incomes (less than 200% FPL) was 11% compared to 16% statewide. The reader should refer to the respective analysis area chapters for numbers and percentages of low income residents by town.

Figure 26: Low Income Population



Unemployment

In March 1999, there were 244,453 individuals in the combined analysis area labor force. Of these, 6,086 (2.5%) were unemployed, as shown in **Figure 27**. The analysis area unemployment rate was lower than the statewide rate. Only the Putnam analysis area has an unemployment rate higher than the statewide rate.

Figure 27: Analysis Area Unemployment Rates

Analysis Area	Number in Labor Force	Number of Employed	Number of Unemployed	Unemployment Rate
Middletown	51,940	50,767	1,173	2.3%
New Milford	22,115	21,639	476	2.2%
Norwich	13,672	13,258	414	3.0%
Oxford	11,585	11,322	263	2.3%
Putnam	34,748	33,471	1,277	**3.7%**
Redding	21,152	20,787	365	1.7%
Sharon	8,131	8,038	93	1.1%
Torrington	51,132	49,783	1,349	2.6%
Windham	29,978	29,302	676	2.3%
Combined Analysis Area	**244,453**	**238,367**	**6,086**	**2.5%**
Connecticut	1,691,548	1,638,102	53,446	3.2%

Source: CT Department of Labor, March 1999

Insurance

In recent years, insurance companies have increasingly shifted their products to managed care plans. These plans were originally seen as a means to control constantly increasing health care costs by increasing the emphasis on preventive services and limiting access to specialty services. Public response has been less than enthusiastic. Vendor control has been eroding over time as both public resistance and legislative intervention have reduced the ability of insurers to deny services seen as inappropriate. Thus, the current trend appears to be somewhat circular, returning to free choice for consumers. No attempt is made in this report to predict the evolution or end result of this activity. It is clear that when rural residents are enrolled in managed care plans, care must be taken to assure that access to care is not reduced. The limited availability of specialists and specialty services in rural areas can result in increased needs for ancillary services such as non-emergency transportation and care coordination because residents must travel outside their local areas to find specialty providers who are approved by their managed care network. Commercial and Medicare managed care vendors have historically limited the marketing of managed care plans in rural areas, as reflected in low penetration rates. CT has converted its basic Medicaid program to a managed care product and must take care that this already vulnerable population is not further compromised by further limiting the availability of providers.

CT is witnessing a dramatic change in the organization, delivery and financing of personal health care services as a result of the development and expansion of managed care for commercial plans, Medicare and Medicaid. This change carries with it the promise of greater efficiency at a reduced cost, but it also introduces the possibility of threats to the quality of care people receive and access to the health services they need. The cost of delivering services continues to increase and this escalation burdens private employers and government by consuming more and more of the available resources. The number of uninsured residents nationwide and in CT is increasing, and the public health system, which traditionally provides a safety net for low income and other at risk individuals, is straining under the pressure of competition for insured patients and no competition for the uninsured.[6]

[6] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 21

Medicaid

In October 1997, CT took advantage of new federal Medicaid regulations known as the SCHIP (State Children's Health Insurance Program) and created the HUSKY (Healthcare for UninSured Kids and Youth) program as a replacement for the existing Medicaid program. SCHIP funds also provided the opportunity to expand coverage to additional groups. Prior to the expansion, CT Medicaid was known as CT Access. The HUSKY program is administered by the CT DSS and has two parts, HUSKY A and HUSKY B. HUSKY Plus is an additional benefit level available to some HUSKY B participants.

There are numerous programs for which Medicaid health coverage is provided, each with its own eligibility criteria. In addition, individuals will qualify for coverage for a period of time, become ineligible and then become eligible again. Total numbers of Medicaid and expansion beneficiaries in CT are increasing due to outreach efforts.

Entitlement Programs

HUSKY A includes both the original Medicaid program and an expansion. SCHIP funding was used to finance the expanded Medicaid program. In addition to clients of the Temporary Assistance to Needy Families program, pregnant women with incomes under 185% of FPL and children in the custody of CT Department of Children and Families, are now eligible for HUSKY A. CT Medicaid is now also available to 14 and 15 year olds with incomes under 185% FPL who became eligible for Medicaid July 1, 1997; to 16 year olds with incomes under 185% FPL who became eligible October 1, 1997; and to 17 and 18 year olds with incomes under 185% FPL who became eligible January 1, 1998.[7] Enrollment in a managed care plan is mandatory.[8]

Figure 28 displays the number of children and adults enrolled in Medicaid in each analysis area, in the combined analysis area and in CT on September 1, 2000. Statewide, slightly more than 7% of the population was enrolled in Medicaid and 75% of enrollees were children. In the combined analysis area, less than 3% of the population was enrolled in Medicaid and the percentage of children enrolled was 79%. A lower percentage of total enrollees for the analysis area is not surprising due to lower numbers of low income residents and higher median incomes in many of the analysis area towns. (See **Figure 22** on **page 20** and **Figure 25** on **page 22**.) However, the difference between total state enrollment and rural area enrollment is larger than expected. Some of the difference may be due to socio-economic issues such as lower education levels, which create a barrier for people who do not read public educational materials. The difference may also be partially due to lack of outreach to rural areas coupled with lack of transportation. Residents may not be able to easily enroll in Medicaid if they lack transportation to an enrollment site and no outreach sites are available to them.

[7] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 54

[8] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 57

Figure 28: HUSKY A Enrollees

Analysis Area	HUSKY A Child Enrollees	HUSKY A Adult Enrollees	HUSKY A Total Enrollees	Total Population	Percent of Population Enrolled in HUSKY A
Middletown	1,519	309	1,828	94,994	1.9%
New Milford	581	104	685	43,702	1.6%
Norwich	615	142	757	24,212	3.1%
Oxford	296	61	357	22,012	1.6%
Putnam	3,130	1,006	4,136	65,112	6.4%
Redding	349	81	430	40,161	1.1%
Sharon	390	84	474	13,150	3.6%
Torrington	2,525	714	3,239	96,082	3.4%
Windham	933	214	1,147	56,302	2.0%
Combined Analysis Area	**10,338**	**2,715**	**13,053**	**455,727**	**2.86%**
Analysis Area % of Total Enrolled	**79%**	**21%**	**100%**		
Connecticut Total	173,980	56,640	230,620	3,271,239	7.05%
Connecticut % of Total Enrolled	75%	25%	100%		

Source: CT DSS, September 1, 2000 enrollment

Non-Entitlement Programs

HUSKY B provides health insurance for uninsured children under age 19 whose family income is between 185% and 300% of the FPL. In addition, families with children who are uninsured and have incomes over 300% of the FPL may buy into the plan at the state negotiated premium rate. Because it is a separate program from Medicaid, HUSKY B is a non-entitlement program. The funds to finance HUSKY B were made available through higher federal matching levels as part of the SCHIP legislation.

Figure 29: Husky B Enrollees

Analysis Area	HUSKY B Enrollees	Analysis Area Population	Percent of Population Enrolled in HUSKY B
Middletown	203	94,994	0.21%
New Milford	105	43,702	0.24%
Norwich	45	24,212	0.19%
Oxford	91	22,012	0.41%
Putnam	146	65,112	0.22%
Redding	55	40,161	0.14%
Sharon	77	13,150	0.59%
Torrington	259	96,082	0.27%
Windham	118	56,302	0.21%
Combined Analysis Area	**1,099**	**455,727**	**0.24%**
Connecticut	7,010	3,271,239	0.21%

Source: CT DSS, HUSKY B Enrollment 1999-2000

Figure 29 displays the average number of children in each analysis area, in the combined analysis area and in CT who were enrolled in HUSKY B during 1999-2000.

HUSKY Plus provides a set of special benefits for children who are enrolled in HUSKY B and have special needs that cannot be accommodated by the standard HUSKY B benefit package. An additional application is required to enroll in HUSKY Plus. HUSKY Plus provides two supplemental insurance options for HUSKY B participants who qualify, HUSKY Plus Behavioral and HUSKY Plus Physical. These programs provide care coordination, case management and direct services. No monthly premium is charged for children with incomes below 235% of FPL. Minimum monthly premiums are charged for children with incomes between 235% and 300% of FPL. Individuals with incomes higher than 300% FPL may buy into the program but pay the full state negotiated premium rate for coverage. Co-payments are also required and vary by service provided, but are subject to annual co-payment maximums.

CT has recently developed the CT Community Health Care Initiative program, which combines HUSKY outreach activities and the Healthy Start Program. The intent is to more efficiently and effectively identify people who could benefit from the expansion of Medicaid and SCHIP eligibility and to help those identified individuals access services.

CTLC (Connecticut Lifelong Care) Program is a recent innovation offered by the CT DSS for adults over age 55 who qualify for nursing home placement. The program is modeled after a national pilot program known as PACE (Programs of All-Inclusive Care for the Elderly). Individuals with household incomes up to 300% of the Supplemental Security Income level qualify for support services designed to help them remain in their own homes. Teams at the Lifelong Care Centers, located in local communities, will provide health care services using a case management approach. While services will be covered by Medicare and/or Medicaid, a wider range of social and supportive services are offered than are covered under these traditional public programs. Unfortunately, this program is not yet available to rural residents since the first two sites are located in Hartford and New Haven.

CHCP (Connecticut Home Care Program) offers adults 65 years of age or older a set of community based services such as home health nursing, homemaker and companion services, adult day care and meals on wheels in an effort to delay or avoid more costly institutionalized care. Services are paid for by Medicare, other third party insurance coverage and by the clients. State and federal funds are available as a last resort.[9]

Medicare

Using the population over age 65 as a proxy for Medicare eligibility, there are 57,874 recipients in the analysis area, representing 13% of the population, as shown in **Figure 30**. This rate is about the same as the statewide percentage.

Figure 30: Analysis Area Residents Eligible for Medicare

Analysis Area	Medicare Eligibles
Middletown	13,099
New Milford	8,024
Norwich	2,367
Oxford	2,419
Putnam	8,478
Redding	3,534
Sharon	2,624
Torrington	13,267
Windham	4,063
Combined Analysis Area	**57,874**
Percent	13%
Connecticut	443,511
Connecticut Percent	14%

Source: CT Department of Economic and Community Development, Town Profiles 1998-1999

Medicare Managed Care

Individuals who are eligible for Medicare coverage have the option of enrolling in a managed care plan if there is a plan(s) approved by HCFA available in the area where they live. These plans typically offer benefits not available in the basic Medicare package, such as preventive services and pharmaceutical coverage. However, availability of plans is constantly changing as some insurance vendors apply for approval to offer Medicare managed care products while other vendors notify HCFA that they will no longer offer managed options to Medicare beneficiaries. When plans discontinue the managed care options, enrollees must find another plan offered in their area or return to the traditional Medicare package.

[9] CT DSS, website, December 6, 2000

There are twelve insurance vendors that were approved by HCFA, as of September 2000, to offer managed Medicare plans to residents of CT. All of the vendors in CT may offer their products countywide in each county for which they hold a license. Some of these companies may not be marketing plans in all or any of the counties for which they are licensed. **Figure 31** displays the companies and the counties in which each company is licensed to offer Medicare managed care plans.

Figure 31: Medicare Managed Care Vendors in CT

Insurance Vendor	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Aetna-US Healthcare, Inc.	X	X	X	X	X	X		
Anthem Health Plans, Inc.	X	X	X		X			
Blue Cross Blue Shield of MA		X						
CIGNA HealthCare of CT, Inc.	X	X	X	X	X		X	
ConnectiCare, Inc.		X			X			
Fallon Community Health Plan								X
Humana Medical Plans, Inc.	X	X			X			
MedSpan Health Options, Inc.		X	X		X		X	
Oxford Health Plans, Inc. (CT)					X			
Oxford Health Plans, Inc. (NY)					X			
Physicians Health Service of CT, Inc.	X	X	X	X	X			
United Health Plans of New England						X		

Source: HCFA Managed Care Data Files, September 2000 Geographic Service Area Report

While some people who are eligible for Medicare are eligible because they have a disability or because they are suffering from ESRD (end stage renal disease), the majority (87%)[10] of recipients are over the age of 65. Because the age distribution of residents varies from county to county, the number of Medicare eligible persons varies by county. In addition, insurance vendors do not usually market special plans to small populations. As a result, residents of the most populous, generally urban, counties have more flexibility in their choice of Medicare coverage. For example, in Windham County, only one plan, marketed by Fallon Community Health Plan, is offered. In Hartford County, residents have a choice of eight plans. All Medicare recipients also have the choice to continue their coverage through traditional Medicare.

Figure 32 displays, as of June 2000, based on county enrollment, the number of Medicare-eligible persons in each CT county, the number of persons enrolled in Medicare managed care plans and the percentage that managed care enrollees represent of the total Medicare-eligible population (market penetration percent). The CT Medicare managed care penetration rate is 20.04%.

Figure 32: Medicare Managed Care Enrollees by County

	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Number Eligible	126,809	142,304	28,972	23,297	133,916	39,151	15,372	16,277
Number Enrolled	26,291	34,307	4,693	3,197	33,649	656	2,449	203
Market Penetration Percentage	20.73%	24.11%	16.20%	13.72%	25.13%	1.68%	15.93%	1.25%

Source: HCFA Managed Care Data Files, June 2000 Market Penetration Report

[10] HCFA Data Files, 1999 Data

It should be noted that the Medicare eligible population reported by HCFA uses actual calendar year 2000 population figures and includes persons eligible because they are either disabled or suffer from ESRD. Therefore the eligible population is somewhat different from the 1999 estimated elderly population used elsewhere in this report.

Within each analysis area chapter of this report, the number of persons enrolled in Medicare managed care plans is estimated for the analysis area based on county market penetration rates and the number of analysis area residents living in each county.

Commercial Insurance

Figure 33: Estimated Commercial Insurance Coverage

	Connecticut		Combined Analysis Area	
Total Population	3,271,239	100%	455,727	100%
Medicare	526,098	16.08%	63,606	13.96%
Medicaid	230,620	7.05%	13,053	2.86%
Uninsured	412,176	12.60%	57,420	12.60%
Commercial	2,102,345	64.27%	321,648	70.58%

Most commercial insurance plans are sold to employers for coverage of their employees. Because the number of people with commercial insurance coverage is not tracked, **Figure 33** displays an estimate of the number of people covered by commercial insurance plans in CT. The result was obtained by subtracting estimated Medicare eligible persons, actual Medicaid enrollees as of September 1, 2000 and estimated uninsured people from the total population of CT and from the population of the combined analysis area.

Commercial Insurance Managed Care

The commercial managed care delivery system in CT is currently extremely volatile. Recently, the University of CT's Center for Survey Research conducted a survey of physicians on the subject of managed care for the Attorney General's office. The survey responses indicate very high levels of provider dissatisfaction with the existing arrangements. Both formulary (85%) and procedure approval process (83%) were mentioned as aspects of managed care that result in a compromise of patient care.

The ten major managed care vendors that were covered by the survey are:

- Physicians Health Services of CT
- Anthem Blue Cross/Blue Shield of CT, Inc.
- ConnectiCare, Inc.
- Aetna/US Healthcare
- Oxford Health Plans of CT, Inc.
- HealthChoice of CT (has gone out of business since survey)
- MedSpan Health Options, Inc.
- CIGNA Healthcare of CT, Inc.
- WellCare of CT, Inc.
- Prudential Health Care Plans of CT, Inc.[11]

All ten of these plans were organized as for-profit businesses and nine market their plans statewide. Coverage through Prudential Health Care Plan of CT is available to residents of Fairfield and New Haven Counties and the town of New Milford in Litchfield County. The number of managed care enrollees in CT was 1,492,686 as of October 2000[12]. This represents approximately 14% of the state population.

The CT Department of Insurance reviews complaints against HMOs (Health Maintenance Organizations). In 1999, the Department of Insurance received 503 HMO complaints that were found to merit further investigation, an increase over 1998.[13] Given the rising number of complaints, the managed care market in CT is likely to be changing drastically in the near future, and to continue to change for some time to come.

[11] CT Attorney General's Office, Press Release, October 23, 2000
[12] *A Comparison of Managed Care Organizations in Connecticut*, CT Insurance Department, October 2000
[13] CT Department of Insurance, Numerical Ranking of HMOs, November 13, 2000

Uninsured

In CT, an estimated 412,000 people (12.6%) were without health insurance in 1998. The uninsured rate in CT has not improved in recent years and in fact appears to be increasing since the three-year average uninsured rate for 1996-1998 was 11.8%.[14] **Figure 34** displays the 1998 CT uninsured rate applied to the population of each analysis area and to the combined analysis area population.

Figure 34: Estimated Uninsured in Analysis Area

Analysis Area	Analysis Area Population	Estimated Uninsured
Middletown	94,994	11,969
New Milford	43,702	5,507
Norwich	24,212	3,051
Oxford	22,012	2,773
Putnam	65,112	8,204
Redding	40,161	5,060
Sharon	13,150	1,656
Torrington	96,082	12,106
Windham	56,302	7,094
Combined Analysis Area	**455,727**	**57,420**
Connecticut	3,271,239	412,176

Source: Children's Health Council, Bureau of Census

Health Status

Perinatal

The perinatal period is the time from pregnancy diagnosis through the six weeks following delivery. The health status and outcome indicators from the perinatal period are often used as standard for the general population's health status.

Figure 35: Analysis Area Birth Rates

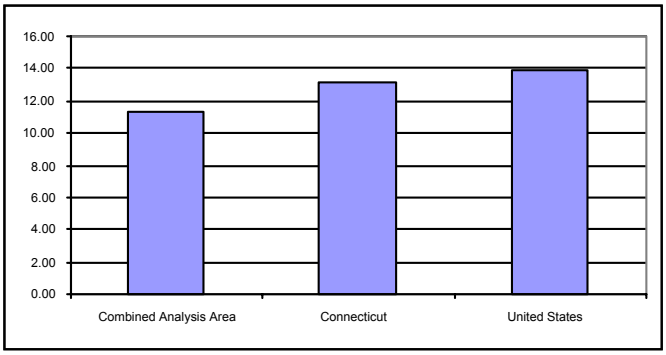
Analysis Area	Number of Births	Population	Birth Rate/1,000 Population
Middletown	1,164	94,994	12.25
New Milford	429	43,702	9.82
Norwich	261	24,212	10.78
Oxford	218	22,012	9.90
Putnam	739	65,112	11.35
Redding	576	40,161	14.34
Sharon	109	13,150	8.29
Torrington	1,052	96,082	10.95
Windham	620	56,302	11.01
Combined Analysis Area	**5,168**	**455,727**	**11.34**
Connecticut	43,048	3,271,239	13.16
United States			13.90

Source: 1997 CT Registration Report

Births

The combined analysis area had 5,168 births in 1997, as shown in **Figure 35** and **Figure 36**. Based on the number of births per 1,000 total population, the birth rate of the rural analysis areas was 11.34, lower than the statewide rate of 13.16 per 1,000 people. For comparison, the US birth rate for 1997 was 13.9 per 1,000 people.

Figure 36: Combined Analysis Area Birth Rate



[14] Children's Health Council, Census Bureau Reports on Uninsured Children in U.S. and CT, October 4, 1999

Figure 37: Combined Analysis Area Teen Birth Percent

Analysis Area	Births to Women <20	Births to Women ≥20	Total Births	Teen Birth Percent
Middletown	26	1,138	1,164	2%
New Milford	16	413	429	4%
Norwich	18	243	261	7%
Oxford	5	213	218	2%
Putnam	93	646	739	13%
Redding	7	569	576	1%
Sharon	14	95	109	13%
Torrington	49	1,003	1,052	5%
Windham	25	595	620	4%
Combined Analysis Area	**253**	**4,915**	**5,168**	**5%**
Connecticut	5,086	37,962	43,048	12%
United States	880,170	5,890,368	6,770,538	13%

Source:1997 CT Registration Report and Alan Guttmacher Institute, *Fulfilling the Promise: Public Policy and U.S. Family Planning Clinics*

Teen Births

During the same period, there were 253 births to teen mothers, for a combined analysis area teen birth percent of 5%, much lower than the statewide teen birth percentage— 12%, as shown in **Figure 37**.

The teen **birth** percent should not be confused with, or assumed to be the same as, the teen **pregnancy** rate. The teen birth rate reflects only those pregnancies that resulted in a live birth, while the teen pregnancy rate includes pregnancies that ended in miscarriage or abortion.

Prenatal Care

Prenatal care utilization is assessed using two risk indicators: "late or no prenatal care" identifies mothers who did not receive care during the first trimester (13 weeks) of pregnancy; "non-adequate prenatal care" uses a composite index reflecting both the trimester in which the first prenatal care visit was made and the total number of visits.[15] As shown in **Figure 38,** 6.28% of combined analysis area women who gave birth in 1997 had late or no prenatal visits, compared to 10.09% statewide; 8.84% of combined analysis area women who gave birth in 1997 had inadequate prenatal care, compared to 12.57% statewide.

Figure 38: Analysis Area Prenatal Visits

Analysis Area	Total Births	Number With Late or No Prenatal Care	Percent with Late or No Prenatal Care	Number With Inadequate Prenatal Visits	Percent with Inadequate Prenatal Visits
Middletown	1,164	75	6.44%	108	9.28%
New Milford	429	22	5.13%	30	6.99%
Norwich	261	20	7.66%	23	8.81%
Oxford	218	14	6.42%	16	7.34%
Putnam	739	64	8.66%	78	10.55%
Redding	576	18	3.12%	23	3.99%
Sharon	109	13	11.93%	26	23.85%
Torrington	1,052	53	5.04%	81	7.70%
Windham	620	46	7.42%	72	11.61%
Combined Analysis Area	**5,168**	**325**	**6.28%**	**457**	**8.84%**
Connecticut	43,048	4,342	10.09%	5,413	12.57%

Source: 1997 CT Registration Report

[15] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 6

Infant Deaths

From 1986 to 1995, there was an overall decline in infant mortality, from 9.0 to 7.3 deaths per 1,000 live births, largely reflecting a 33% decrease in the neonatal mortality rate. The decrease in infant mortality is believed to result from the improved efficacy of newborn intensive care units, with increased survival mainly for infants of moderately low birth weight.[16]

A five-year history is used to analyze the infant mortality rates for the analysis areas in order to reduce the data skewing that can result when dealing with small numbers of both deaths and births. As shown in **Figure 39**, for the years 1994 through 1998, there were 26,454 births and 141 infant deaths to women living in the combined analysis area, resulting in an infant death rate of 5.33 per 1,000 live births, a rate that is lower than the statewide rate of 7.17 for the same period.

Figure 39: Combined Analysis Area Infant Deaths (1994-1998)

Analysis Area	Number of Deaths	Number of Births	Infant Death Rate/1,000
Middletown	34	5,609	6.06
New Milford	2	2,123	0.94
Norwich	8	1,369	5.84
Oxford	6	1,181	5.08
Putnam	30	3,762	7.97
Redding	10	2,770	3.61
Sharon	6	598	10.03
Torrington	25	5,489	4.55
Windham	20	3,553	5.63
Combined Analysis Area	**141**	**26,454**	**5.33**
Connecticut	1,588	221,427	7.17

Source: CT DPH, 1994-1998 Table 2B, Resident Births, Deaths, Fetal Deaths and Infant Deaths

Preventive Care for Medicaid-Enrolled Children

The federal EPSDT (Early and Periodic Screening, Diagnosis and Treatment) program for children enrolled in Medicaid requires states to provide comprehensive screening, diagnosis and treatment benefits to all Medicaid beneficiaries under age 21. The program is designed to improve primary health benefits for children by emphasizing preventive care through distinct periodicity schedules for: vision, dental, hearing, blood lead level screenings, immunizations and developmental assessments.[17] States are required to maintain a participation rate of 80%. Participating insurance plans are required to provide these services to all eligible residents under CT's Medicaid program.[18]

[16] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 5

[17] U.S. Department of Health and Human Services, HCFA, *State Medicaid Manual, Part 5: Early and Periodic Screening, Diagnosis, and Treatment*. Washington, DC, April 1990

[18] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services*, 1999, page 60

In CT, the Children's Health Council and the CT Children's Health Project track health services provided to children and monitor the rate at which children enrolled in Medicaid are receiving preventive and screening services according to the periodicity schedule. The results of this monitoring activity are summarized in quarterly EPSDT On-Time Visit Rate Reports.[19] **Figure 40** displays the EPSDT On-Time Visit Rate for each analysis area, for the combined analysis area and for CT for the fourth quarter of 1999, the latest available data at the town level. The combined analysis area rate was 35.9% while the state on-time visit rate for the same period was 32.1%. Five of the nine analysis areas have a better on-time rate than the state, with the Middletown rate the highest. However, the rate for CT indicates that less than one third of Medicaid-enrolled children are receiving timely preventive and screening services. Even in the Middletown analysis area, nearly six of every ten Medicaid-enrolled children are not receiving preventive and screening services in accordance with the periodicity schedule for these services.

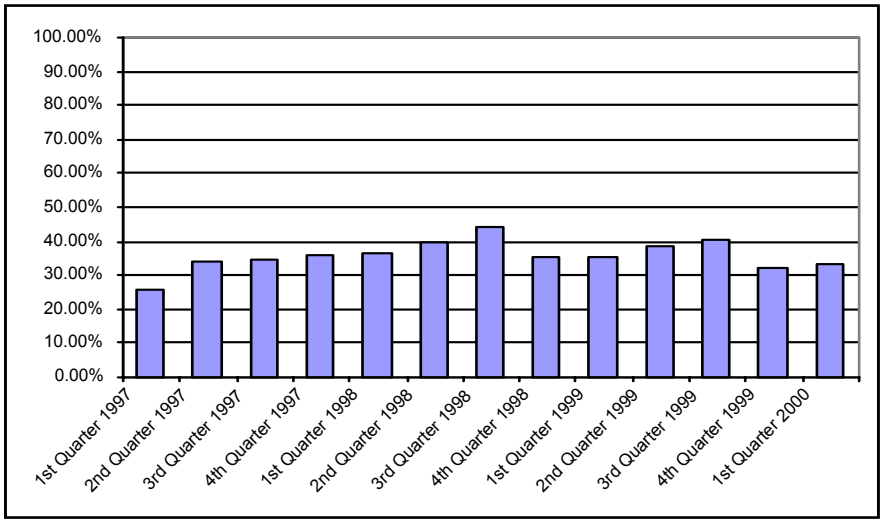
Figure 40: Medicaid Preventive Care

Analysis Area	Missed	Received	Total	On-Time Visits Received
Middletown	222	166	388	**42.8%**
New Milford	92	39	131	29.8%
Norwich	104	49	153	32.0%
Oxford	39	24	63	**38.1%**
Putnam	559	261	820	31.8%
Redding	51	24	75	32.0%
Sharon	65	31	96	**32.3%**
Torrington	379	232	611	**38.0%**
Windham	131	94	225	**41.8%**
Combined Analysis Area	**1,642**	**920**	**2,562**	**35.9%**
Connecticut	30,314	14,359	44,673	32.1%

Source: Children's Health Council, EPSDT On-Time Visit Rates, Fourth Quarter 1999

Figure 41 displays the EPSDT On-Time Visit Rate for CT over the past four years. EPSDT participation rates have improved over the time period shown, but still remain far below the 80% target set by the federal government. Third quarter rates are consistently higher than other quarters reported, apparently due to school and early childhood program requirements for annual physicals prior to the start of the school year.

Figure 41: Historical EPSDT On-Time Visit Rate for CT



[19] Children's Health Council, EPSDT On-Time Visit Rates Report Narrative Fourth Quarter 1999

County Health Indicators

Some health indicators are available only at a county level. **Figure 42** shows the population of the each analysis area compared to the population of the county or counties in which it is located. Even with small representation in some counties, there are some countywide health indicators that warrant review.

Recently, the DHHS, HRSA (Health Resources and Services Administration) has made available a series of *Community Health Status Reports* to provide information on the health status of U.S. residents. These reports are available at the county level only. Expectations are based on comparisons with "peer" counties. Peer counties were identified through similarities in frontier status, population, poverty levels, median age categories and population density.

Figure 42: Population of Analysis Areas Compared to Population of Counties

Analysis Area	Analysis Area Counties	Analysis Area Population	County Population	Analysis Area % of County Population
Middletown	Middlesex	50,076	149,610	33%
	New Haven	36,249	790,961	5%
	New London	12,335	251,177	5%
New Milford	Fairfield	2,997	836,207	0.4%
	Litchfield	24,190	181,874	13%
	New Haven	16,515	1,018,018	2%
Norwich	New London	24,212	251,177	10%
Oxford	New Haven	22,012	790,961	3%
Putnam	Windham	65,112	105,074	62%
Redding	Fairfield	40,161	836,207	5%
Sharon	Litchfield	13,150	181,874	7%
Torrington	Hartford	35,034	819,250	4%
	Litchfield	61,048	181,874	34%
Windham	Tolland	40,171	131,380	31%
	New London	6,491	251,177	3%
	Hartford	5,706	819,250	1%
	Windham	3,394	105,074	4%

Source: CT Department of Economic and Community Development, Town Profile Report, 1998-1999

The *Community Health Status Reports* for the analysis areas are summarized in **Figure 43**. It should be noted that the indicators in these reports are based on 1997 county population figures, which are different from the population totals used elsewhere in this report.

Figure 43: Infectious and Environmental Diseases for Combined Analysis Area

Conditions	Actual Cases	Expected Cases	Actual as % of Expected
Hepatitis A	387	679	57%
Hepatitis B	162	249	65%
Measles	3	9	33%
Pertussis	139	322	43%
Congenital Rubella Syndrome	-	-	-
E. Coli	**176**	**125**	**141%**
Salmonella	1,653	1,694	98%
Shigella	357	616	58%
Total Combined Analysis Area	**2,877**	**3,694**	**78%**

Source: US DHHS, HRSA, July 2000 (1997 population)

As shown in **Figure 43**, the rates of occurrence for infectious and environmental diseases indicate that residents of the analysis area are generally experiencing these conditions at rates lower than the expectations set by HRSA through the peer county comparison process. However, the rate at which infections due to E. Coli are occurring are higher than expected. In addition, some of the counties in which the individual analysis areas are located have rates of infection for some conditions that are higher than expected. The reader should refer to individual analysis area chapters for more detail.

Vulnerable populations are those groups of individuals who, because of social, economic, age, cultural or other factors, can be expected to have poorer health status and more need for medical services than the general population. Large numbers of people who do not have the education needed to read outreach materials, are using drugs, are unable to work and/or are depressed, can tax local health delivery systems by creating unusual levels of need. Therefore, information on the number of people in the analysis area with these increased needs is important for health planning and implementation. HRSA has identified a set of factors to be used to predict the level of vulnerable populations in a study area. These factors, and the actual number of county residents to whom each applies, are shown in **Figure 44**. The percentage of the analysis area population residing in each county was applied to the vulnerable population total for that county to estimate the totals for each analysis area. Given that all of the CT counties in which analysis areas are located contain both urban and rural areas and residents, these figures may not truly reflect the vulnerability of the analysis area population and should be considered a tool providing a general estimate of risk. Because both unemployment and age are additional factors that impact general health, **Figure 44-A** displays actual numbers of unemployed and elderly persons in the combined analysis area. It should be noted that the categories shown in **Figure 44** are not exclusive; some members of each risk category are also members of other categories.

Figure 44: Vulnerable Populations

Vulnerable Population	Estimated Number in Middletown Analysis Area	Estimated Number in New Milford Analysis Area	Estimated Number in Norwich Analysis Area	Estimated Number in Oxford Analysis Area	Estimated Number in Putnam Analysis Area	Estimated Number in Redding Analysis Area	Estimated Number in Sharon Analysis Area	Estimated Number in Torrington Analysis Area	Estimated Number in Windham Analysis Area
People with no High School Diploma (Among Adults Age 25 and Older)	13,508	5,549	3,055	3,608	12,115	5,464	1,678	15,664	6,895
People who are Severely Work Disabled	1,987	705	501	511	1,395	786	195	1,567	1,180
People Suffering from Major Depression	5,115	2,023	1,195	1,182	3,174	2,076	645	4,777	3,001
Recent Drug User (June 2000)	4,166	1,639	980	973	2,598	1,715	517	3,867	2,471

Source: US DHHS, HRSA, July 2000 (1997 Population)

Figure 44-A: Vulnerable Populations

Vulnerable Population	Combined Analysis Area
Unemployed individuals (1999)	6,086
Elderly	63,606

Sources: Population-CT Department of Economic and Community Development, Town Profiles 1998-1999; Unemployment-CT Department of Labor, March 1999

Mortality

Age-adjusted mortality rates per 100,000 people for each town are shown in the respective analysis area chapters of this document. Age-adjusted rates are not shown in this overview because these rates are not available combined at the analysis area level. In addition, because of the small populations of many rural towns, the Office of Planning, Policy and Evaluation does not calculate age-adjusted rates for areas with fewer than 11 deaths from a specific cause. Because of the lack of complete age adjusted information for several towns and causes, **unadjusted** mortality rates for the combined analysis area are shown in **Figure 45**. Using unadjusted rates, all of the analysis areas, except Sharon analysis area, have a lower than statewide rate for Deaths from All Causes, Malignant Neoplasms and Pneumonia and Influenza. With the exception of the Torrington and Sharon analysis areas, all analysis area unadjusted rates that are lower than the statewide rate for Diseases of the Heart. The Middletown, Oxford and Sharon analysis areas have higher than statewide unadjusted rates for Cerebrovascular Disease. The Middletown, Putnam and Sharon analysis areas have higher than statewide unadjusted rates for Chronic Obstructive Pulmonary Disease.

Figure 45: Unadjusted Mortality Rates

Leading Causes of Death	Middletown Area as % of State	New Milford Area as % of State	Norwich Area as % of State	Oxford Area as % of State	Putnam Area as % of State	Redding Area as % of State	Sharon Area as % of State	Torrington Area as % of State	Windham Area as % of State
All Causes	96%	55%	67%	72%	86%	59%	**144%**	99%	62%
Diseases of the Heart	85%	59%	55%	63%	78%	55%	**123%**	**109%**	57%
Malignant Neoplasms	98%	90%	91%	88%	95%	65%	**158%**	98%	74%
Cerebrovascular Disease	**112%**	55%	50%	**109%**	79%	68%	**170%**	89%	73%
Chronic Obstructive Pulmonary Disease	**125%**	33%	85%	70%	**139%**	45%	**177%**	35%	46%
Pneumonia & Influenza	84%	61%	44%	84%	81%	53%	**242%**	91%	28%

Source: 1997 CT Registration Report

Overview
Market Assessment

Focus Groups

Separate focus groups for consumers and providers were conducted in seven of the nine analysis areas. No focus groups were held in the Redding and Oxford analysis areas; CT-SORH requested data analysis only for those analysis areas. Stakeholders who represented providers and consumers of health care services were identified by the CT-SORH, local Area Health and Education Centers, service agencies, community leaders and health care entities. Providers were defined as licensed health care professionals. Consumers were defined as past, present or anticipated users of health care services. Meeting dates were arranged at times and locations thought to be convenient to both groups and refreshments were offered. Letters of invitation to both Providers and Consumers were then sent. Because of low turnout, repeat focus groups were held for the Middletown (both providers and consumers) and Torrington (providers) analysis areas. Since the CT-SORH was coordinating a Rural Health Conference during the time period when the first focus groups were held, surveys were also distributed at the conference. **Figure 47** and **Figure 46** display a count of the focus group participants for each analysis area, including those who returned surveys at the Rural Health Conference.

Figure 47: Participants in Consumer Focus Groups

Analysis Area	Number of Participants
Middletown	6
New Milford	6
Norwich	5
Oxford	N/A
Putnam	8
Redding	N/A
Sharon	13
Torrington	11
Windham	7

Figure 46: Participants in Provider Focus Groups

Analysis Area	Number of Participants
Middletown	4
New Milford	4
Norwich	3
Oxford	N/A
Putnam	7
Redding	N/A
Sharon	6
Torrington	16
Windham	2

Service Types

The focus group participants (and attendees at the CT Rural Health Conference) were asked to complete a survey by rating "Quality of Service" and "Accessibility of Service" for 14 types of health related activities. Participants scored each service on a scale of 1-5 (with 1 being "poor" and 5 being "excellent") for both the Accessibility and Quality of the service. They were further encouraged to indicate if some sort of change in the particular service was "needed" or "greatly needed". Finally, participants were encouraged to submit individual and verbal comments about each service. These comments are quoted verbatim, as they were written on the survey forms. Survey responses were tabulated for each service within each analysis area. The responses are summarized in separate sections of the chapters of this document corresponding to each analysis area. In addition, because the safety net providers cross all of the services, a separate section covering safety net issues is presented within each analysis area chapter prior to the sections covering the fourteen service types. **Figure 48** displays the fourteen service types evaluated by participants at each focus group meeting.

Figure 48: Services Evaluated by Focus Group Participants

Primary Care	Physician Specialty Services
Prenatal Care	Physical Therapy Services
Obstetrical Services	Acute Care (Inpatient Hospital Care)
Public Health Services	Emergency Department Services
Mental Health Services	Emergency Ambulance Transportation
Dental Care	Nonemergency Transportation
Home Health Services	Long Term Care

Safety Net Providers

Safety net providers comprise the system that addresses the needs of those individuals who have special problems or experience barriers when accessing the traditional health care system. One of the primary groups targeted by safety net providers is the uninsured. There are an estimated 57,420 uninsured individuals in the combined analysis area who need supported access to health care services.

"At the request of the Public Health Subcommittee of the State Legislature's Medicaid Managed Care Council, an inventory of "safety net" health care providers in CT was undertaken by DPH."[20] The study defined as safety net providers: VNAs, LHDs (Local Health Departments), SBHCs, Public Health Dental Sites, CHCs and Family Planning Clinics.[20] This report divides coverage of the VNAs into two categories, traditional visiting nurse/home health activities and well child clinic activities.

Approximately 340 providers make up the public health safety net in CT. These include:

VNAs	40 agencies
LHDs/Health Districts	113 departments, including 18 health districts
School Based Health Clinics	64 school clinics; 46 are school based
Public Health Dental Service Sites	43 sites
CHCs	12 corporations; 55 clinic sites
Family Planning Clinics	26 sites

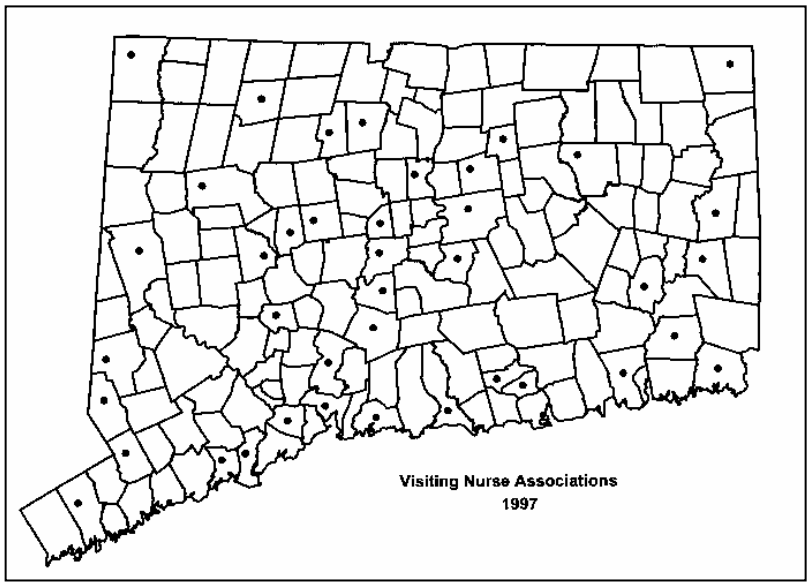
"With the advent of managed care and other major shifts in the health care funding environment, municipal health departments and voluntary or non-profit sector health care agencies in CT, which make up the state's health care "safety net," faced a shifting client base, increased administrative costs and decreased revenues. Reportedly this had forced some providers to consolidate operations, curtail services or close down entirely. Weakening of this infrastructure threatens not only the state's capacity to care for its uninsured and for its populations at risk but also its ability to meet its overall public health obligations to promote health and prevent disease and injury."[20]

VNAs

VNAs, which are traditional, non-profit public health nursing organizations, were established in communities throughout the state in the early part of this century to care for the sick in their homes and to carry out many kinds of community activities to promote health and to prevent the spread of disease. Most of the early organizations were private, non-profit entities supported by communities. Some were incorporated directly under town charter and nine are still under town charter.[21]

VNAs are subject to state licensure as home health care agencies. **Figure 49** displays the locations of VNAs offering home health services.

Figure 49: VNA Home Care Locations

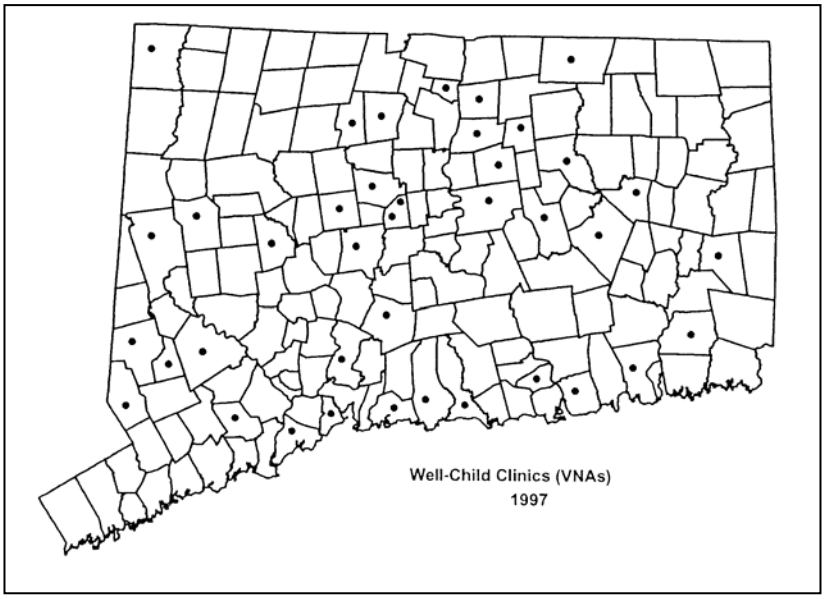


Source: Statewide map reproduced from *Looking Toward 2000*

[20] *Safety Net Providers in Connecticut*, A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in Looking Toward 2000, Appendix G, page 311

[21] *Safety Net Providers in Connecticut*, A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in Looking Toward 2000, Appendix G, page 324

Figure 50: VNA Well Child Clinic Locations



Source: Statewide map reproduced from *Looking Toward 2000*

If a VNA also offers well child clinics, as 39 of the 40 still do, the clinics are subject to licensure as outpatient clinics.[22] **Figure 50** displays the locations of well child clinics offered by VNAs.

In addition to traditional reimbursement sources, VNAs are funded by state grants for specific prevention programs such as immunization awareness and outreach, Healthy Start or WIC; state and federal grant funds to support home health services; some municipal funds; patient fees; and private funds and donations.

Health Departments and Districts

The public health system refers to the combined capacity of federal, state and local governments to protect the health of their citizens. The basic responsibilities of the CT public health system include:

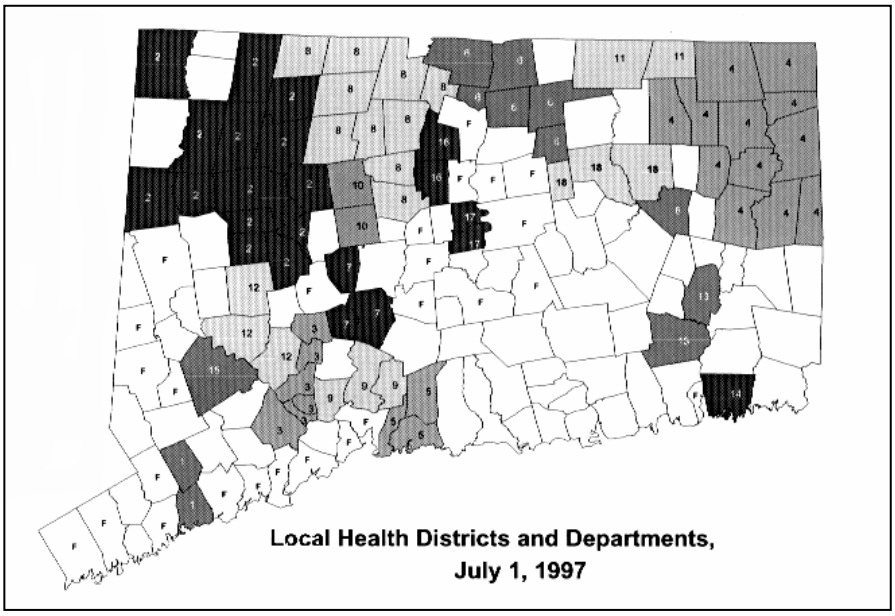
- Collecting, analyzing and disseminating vital statistics
- Providing health information and education
- Investigating epidemiological issues and indicators
- Providing laboratory analysis for environmental samples
- Administering programs

Each CT municipality is served by a LHD or district. LHDs, whether part-time or full-time, serve under the direction of the municipal legislative body (Board of Selectpersons or Town Council) of the community served. Municipalities having a population of 40,000 or more for five consecutive years are required to be served by a full-time director of health. Currently, there are 69 part-time and 26 full-time LHDs. A health district is a regional health department formed by two or more municipalities to provide full-time public health services. A health district serves under the direction of a board of directors representing the member municipalities.[23] CT has 18 health districts serving 83 municipalities. **Figure 51** illustrates the communities served by a LHD and those served by a health district. Most of the rural towns are served by part-time LHDs although a few towns have services offered by the larger health districts.

[22] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January, 1998, as included in *Looking Toward 2000,* Appendix G, page 324

[23] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 25

Figure 51: Local Health Departments and Districts



Source: Statewide map reproduced from *Looking Toward 2000*

LHDs and Districts are critical providers of essential public health services at the local level in CT. These departments are governmental entities separate from DPH, but are linked by statute in several important ways:

- Approval of local Directors of Health appointed by the Commissioner of Public Health
- Mandates to carry out critical public health functions on the community level in the areas of infectious disease control and environmental health
- Legal authority to levy fines and penalties for public health code violations
- Legal authority to grant and rescind license permits for food service establishments, septic systems and other activities affecting the local environment
- Funding to carry out the full area of public health activities to improve the health of people in their jurisdictions

Municipal health authorities and districts are required by DPH to include in their responsibilities the enforcement of the state public health code. Often this is a difficult task with the wide variety of services needed and the limited municipal budget to pay for those services.[24]

LHDs are funded primarily with municipal appropriations, but they also receive state grants, federal grants and private foundation funds. In addition, they generate revenues from fees and licenses and the imposition of fines and penalties. State "per capita" funding is available to LHDs as long as program components found in "Basic Local Health Program" are provided to the community. The eight essential public health services provided through the local health infrastructure are: health planning, communicable and chronic disease control, health education, environmental health services, community nursing services, nutrition services, maternal and child health services and EMS. In addition, municipalities must commit a minimum of $1.00 per capita from the annual tax receipts for a health department to receive state "per capita" funds. LHDs are encouraged to form regional health districts through the provision of financial incentives for member towns.

Many of the focus group attendees made statements indicating that they believe, as do many others, that the VNAs operating in CT are the public health system. In fact, VNAs are non-profit agencies devoted to providing services, with particular focus on the underserved, elderly and children. Often, VNAs are operating activities such as well child clinics under contract with the public health system. However, they are not government agencies.

[24] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 25

The public health departments are knowledgeable regarding need while the VNA employees can actually deliver services. An opportunity exists for public health administrators to improve and increase delivery and coordination of services and to identify individuals who need services. In CT, the LHDs and Health Districts have evolved over the years away from the delivery of services such as running clinics, delivering home health services and actively providing school health programs as they concentrate on protecting the overall health of CT residents through environmental testing and enforcement activities. Many of the combined analysis area towns have only part-time health department coverage and do not have the local resources to offer comprehensive health services. Even towns with coverage through the larger regional health districts do not typically enjoy medical care offered in their communities.

CT lacks the county based formal regional system of public health care delivery found in other parts of the United States.[25]

SBHCs

The first DPH funded SBHCs (School Based Health Centers) were established in 1985.[26] Services are provided by multidisciplinary teams of professionals with expertise in pediatric and adolescent health care including nurse practitioners, physician assistants, social workers, doctors, dentists and/or dental hygienists. Although services are targeted toward uninsured or underinsured students or those without a family doctor, any child enrolled at a site school may utilize the services with parental permission.[27]

Although DSS requires participating Medicaid plans to contract with SBHCs in the plans' geographic service areas, there have been many organizational and financial barriers to integrating these entities into the Medicaid managed care program. A major barrier is the merging of two separate organizational cultures, as both health plans and SBHCs have little expertise in working with each other. There have also been lengthy credentialing processes for the centers and their providers, preauthorization hurdles and limitations on covered services. Contracting with SBHCs for behavioral health services remains a problem, as many plans typically subcontract the behavioral health portion of coverage, and some subcontractors remain unwilling to include SBHCs. The DPH and DSS have worked together to identify barriers to the contracting process and to facilitate a resolution to the problems mentioned above. All SBHCs have been able to contract for primary care and continue to pursue mental health sub-contracts.[28]

For more than two decades, schools in the state have attempted to bring health care services closer to students in need by providing these services on site. In 1985, a highly effective strategy for improving the health status of children and adolescents at health risk was introduced in CT— the school-based health center model for the provision of primary health care and mental health services within the school setting. SBHCs provide a wide range of health care services, including dental health, mental health and social services through interdisciplinary teams.[29]

[25] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 316

[26] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 262

[27] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 263

[28] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 59

[29] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 322

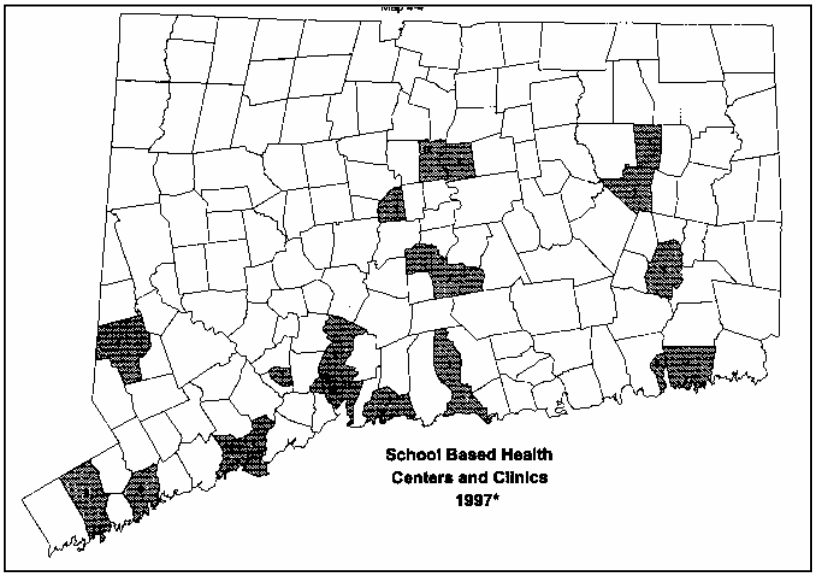
Figure 52: Sources of Funding for SBHCs

State Grants	$	3,837,129
Federal Grants	$	392,218
Private Foundation Funds	$	725,270
Total	**$**	**4,954,617**

Source: *Safety Net Providers in CT,* January 1998, as included in *Looking Toward 2000,* Appendix G, page 323

The SBHCs are supported by municipal funds for general operations; state grants for planning, expansion and specific programs such as immunizations and HIV/AIDS testing; federal funds; and private funds as summarized in **Figure 52**.[30]. In order to receive funding from DPH, the center must match the DPH funds with 25% in municipal funding. In addition, when a SBHC is sponsored by a CHC, federal funds through the PHS are available.

Figure 53: School Based Health Center Locations



Source: Statewide map reproduced from *Looking Toward 2000*

In SFY97 (state fiscal year), there were 64 licensed clinics providing school health services in CT. Of these, 46 met the criteria for a SBHC, as established by DPH. Eighteen provided dental services.[31] **Figure 53** displays the locations of SBHCs in CT.

Public Health Dental Sites

For nearly a century, preventive dental care has been provided through CT's schools.[32]

There are currently 43 sites where public health dental services are provided. The sites are operated by the organizations shown in **Figure 54**.[33] Only one LHD, Old Saybrook, is operating a dental site, with the others sponsored by hospitals, CHCs and SBHCs. Old Saybrook is the only public health dental site within the combined analysis area.

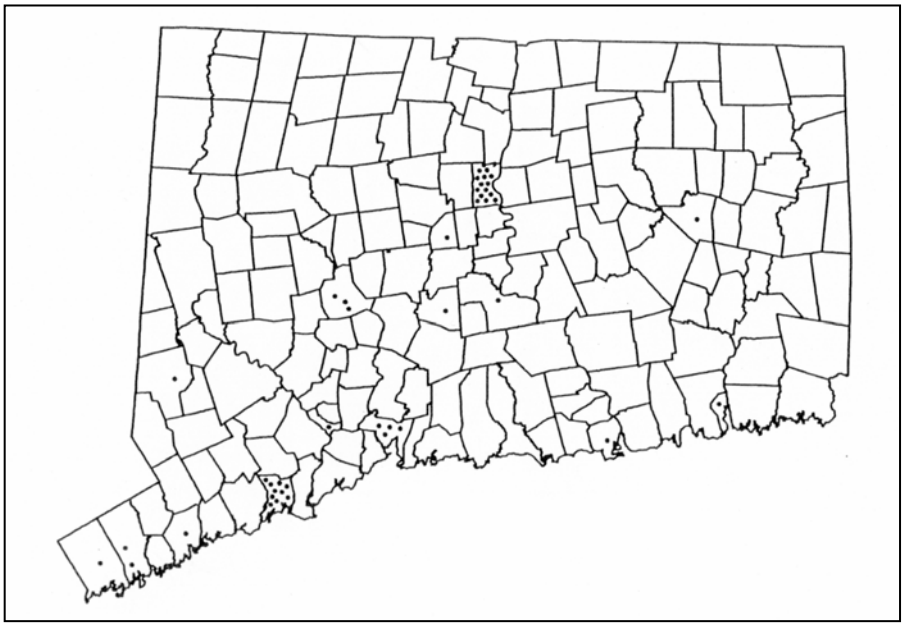
Figure 54: Operators of Public Health Dental Sites

Operator	Number
CHC	13
SBHC	18
LHD	1
Hospital	11
Total	**43**

[30] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 323
[31] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 322
[32] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 321
[33] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 321

The map in **Figure 55** displays the public health dental sites operating in CT.

Figure 55: Public Health Dental Sites in CT



Source: Statewide map reproduced from *Looking Toward 2000*

CHCs

CHCs are public or private non-profit medical care facilities that offer comprehensive, community-based, primary health care services to low-income, uninsured or underinsured persons and are located in MUAs.

From SFY90 to SFY96, the utilization of CHCs has more than doubled.

Twelve CHC corporations run a network of 55 clinical sites. The sites include SBHCs, dental service sites, shelters for the homeless, senior center clinics and general primary care clinics.[34]

CHCs are defined under Section 19a-490(a) of the *CT General Statutes* for funding purposes. In order to receive state or federal funding, a CHC must be located in federally designated MUA or serve a MUP, have a board composition that is predominantly community users, have certain staffing and hours of service, provide a sliding fee schedule and meet other criteria defined in law. CHCs in CT are subject to licensure as outpatient clinics. CHCs are funded by DPH for general operations, expansion activities, and specific programs such as STDs (sexually transmitted diseases) screening, HIV/AIDS testing and counseling and immunization tracking. The State Bonding Commission provides funds for capital projects. CT CHCs also are eligible for federal grants through Section 330 of the U.S. Public Health Service Act. [35]

CHCs are also supported through several state and federal programs: the State Loan Repayment Program, which helps to attract qualified health care professionals to underserved communities by repaying educational loans; the placement of NHSC professionals in qualified practices including CHCs; the J-1 Visa Program, which allows qualified foreign medical school graduates to work in primary care settings in federally designated underserved areas through a two year immigration waiver; and the federal Primary Care Fellowship Program, which funds the

[34] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 317

[35] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 317-18

Figure 56: Sources of Funding for CT CHCs

CT DPH (general operations and expansion)	$ 4,830,557
Bonding Commission (capital projects, bonding)	210,000
Federal Funding	410,200
Total	**$ 5,450,757**

Source: *Safety Net Providers in CT*, January 1998, as included in *Looking Toward 2000,* Appendix G, page 319

placement of physician, physician assistant and nurse practitioner students in CHCs as part of their graduate education. Funding for CHCs in CT in SFY97 is summarized in **Figure 56**.[36]

As CHCs are a major source of health and dental care for the uninsured and underinsured, and have historically provided low cost or free health care to all persons in need, adequate reimbursement continues to be an issue. While services and treatments may be "free" to the patient, CHCs incur costs to render their services. Unless the CHCs receive adequate reimbursement from patients or third party payers, or funding from grants, they may be forced out of business, ultimately reducing access to medical care for those with the greatest needs.[37]

Historically, public health agencies have also assumed responsibility for the delivery of health services to those with inadequate insurance coverage. Until about ten years ago, funding to provide health services to inadequately insured people came through direct grants or was cost-shifted from other payers. Recently, grant funding has declined, and because of cost containment pressures initiated by managed care activities, the ability of public health providers to shift costs from other payers has diminished. This situation places the financial viability of agencies like CHCs and SBHCs at risk at a time when the need for these services is expanding rapidly. The need to develop a strategy to reinforce and strengthen these traditional safety net providers is urgent.[38]

When overlap is eliminated (e.g., CHCs that run SBHCs, SBHCs that run dental service sites), the unduplicated count of safety net providers in CT is about 300. All serve significant numbers of the uninsured and underinsured.[39] However, as shown in the chapters of this document that cover each analysis area, the availability of these safety net providers is extremely limited in rural areas of CT.

The FQHC Program is a reimbursement strategy that provides cost-based reimbursement for services delivered to Medicare and Medicaid patients. This enhanced reimbursement is significant. All CHCs that receive federal Section 330 grants are automatically eligible for FQHC reimbursement.

FQHC Look Alikes are CHCs that meet federal requirements for the receipt of grant funding, but do not actually receive a federal grant. There have been years when federal appropriations have not supported the development of new CHCs. One of the primary benefits of FQHC Look Alike status is access to the enhanced reimbursement from Medicare and Medicaid. In addition, FQHC Look Alikes have an advantage as new CHCs are selected for grant funding, since the FQHC Look Alikes by definition meet the federal requirements for grantees.

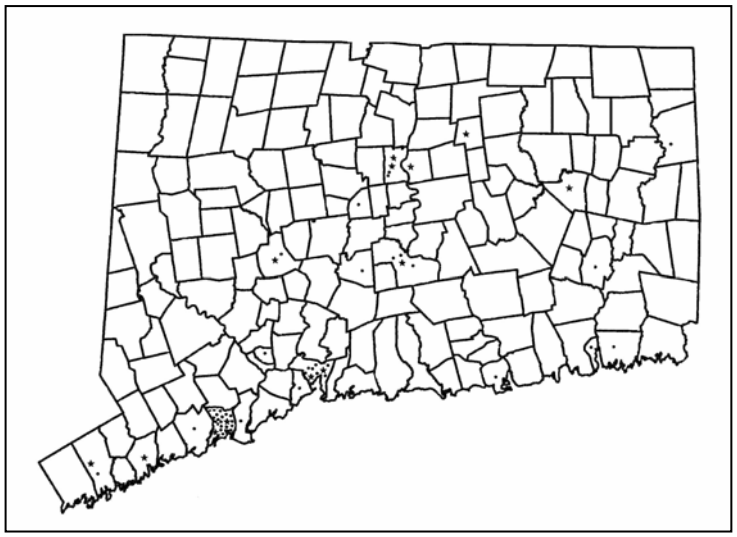
Another program that supports the provision of primary care services in rural areas is the federal RHC program. This program was established in 1977 to provide cost-based reimbursement for services delivered to Medicare and Medicaid patients by practices located in designated underserved and rural communities. There are currently no RHCs in CT.

The provision of primary and ancillary services in rural communities, particularly to the low income underserved populations, is a major concern for state policy developers and planning personnel. Both the CHC and RHC pro-

[36] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 319
[37] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 271
[38] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 285
[39] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 328

grams are potential strategies for meeting that need that will also affect the implementation of the CAH program in CT.

Figure 57: Community Health Centers in CT



Source: Statewide map reproduced from *Looking Toward 2000*

CHC sites in CT are shown in **Figure 57**. Very few CHCs are located in or offer services to rural towns. The Putnam analysis area has one CHC, a satellite site of Norwich based Generations, in Killingly. The Middletown analysis area has a CHC in Old Saybrook. The Charlotte Hungerford Hospital in Torrington operates a community clinic, but it is not consumer controlled.

Family Planning Clinics

In SFY 99 there were 16 DPH funded licensed family planning clinic sites in the State, providing comprehensive reproductive services to men and women of all ages. There were a total of 24 clinics; federal Title X* and private funds supported the additional eight clinics.

Family planning clinics are funded by DPH for general operations and for specific programs such as STD and HIV/AIDS testing and counseling and with federal grants through Title V Maternal and Child Health funding. The clinics also receive private donations, some municipal funds and collect fees from private pay patients, Medicaid and private insurers. DPH contracts for services with Planned Parenthood of Connecticut, which subcontracts with 19 family planning affiliates. DPH funding to family planning clinics in SFY 99 is shown in **Figure 58**.[40]

Figure 58: Sources of Funding for Family Planning Clinics

DPH (general operations and expansion)	**$1,172,644**
DPH (STD, breast/cervical cancer screening, etc.)	**139,010**
Direct Federal Funding (Title X)	**1,690,905**
Total	**$3,002,559**

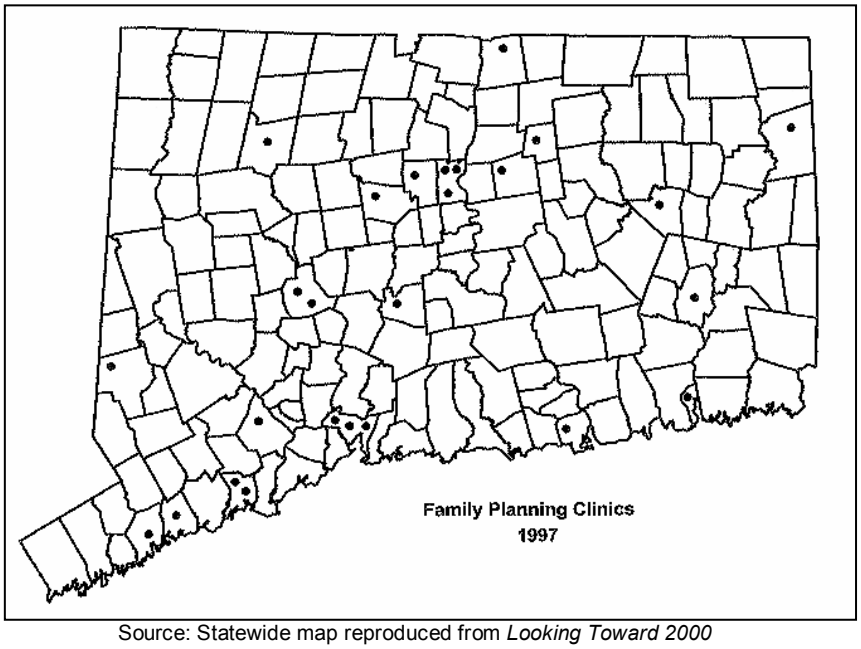
Source: DPH staff

* Title X of the Public Health Service Act established the national family planning program in 1970. Federal funds are provided for public and non-profit organizations for the provision of family planning information and services.

[40] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 320

The locations of family planning clinics are shown in **Figure 59**.

Figure 59: Locations of Family Planning Clinics



Source: Statewide map reproduced from *Looking Toward 2000*

Health Services Priorities

- Reinforce and strengthen the public health infrastructure
- Focus resources on the collection, analysis, interpretation, and dissemination of health data and information for better monitoring of the health care delivery system
- Promote the development of adequate programs and services for persons 65 years of age and older
- Monitor the growth and development of managed care and its impact on the delivery and utilization of personal health care services
- Expand access to affordable health insurance and primary and preventive health care services to the uninsured and underinsured[41]

Healthy Communities

Over the past decade, there has been increasing support at the national, state and local levels for Healthy Community initiatives. These initiatives focus on the need for community level interventions to improve the overall health and quality of life for communities by organizing the business, government and health sectors to address local issues and needs. Policy-makers, providers and consumers in health care have come to view health as an outcome, directly related to factors such as education, lifestyle, income, nutrition and sanitation. The healthy community concept relies on personal and community responsibility for determining health status.

The community often begins by developing a local needs assessment process. The assessment includes a traditional review of health status and available resources along with a look at related issues such as rising crime, depressed economies and quality of health and education programs. The results contribute the information necessary for the stakeholders to develop policy and strategies that are tailored to the community's needs and resources.

[41] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 17

The policy consensus of a stakeholders' group promotes the unity of the community and allows the participants to work together to remove the obstacles to optimum health status. In addition, a collaborative intervention such as violence prevention programs through schools, police and LHDs can be more cost-effective than each agency supporting independent programs.[42]

In support of the Healthy Communities initiatives, the Joint Commission on Accreditation of Health Care Organizations has updated their quality of care standards to include service planning in response to community needs.[43] This action has brought the hospitals into a more active role in community health planning. Many healthy community initiatives exist in CT. Some of the efforts were initiated by local hospitals in response to accreditation requirements and others arose from LHDs in response to Healthy People 2000. It appears that, regardless of the impetus, the communities are willing to take responsibility for assessing overall health status and combining efforts to address the needs identified. Collaboration in both assessment and policy development brings a two-fold benefit to the community— a documentation of need and a council of representatives already in place to address future changes and needs in the community.[44]

Primary Care

Primary care is often the first health care contact for the patient. Primary care can be preventive or directed toward addressing a disease or condition. A primary care provider (physician or midlevel practitioner) makes the initial assessment and attempts to solve as many patient problems as possible. These providers coordinate the health care team, including ancillary health personnel and specialists necessary to deal with the patient's condition, and provide continuing contact with the patient and his/her family. Primary care services are usually delivered in the provider office or clinic, the patient's place of residence or at a special clinic site. The optimal primary care is both preventive and comprehensive in nature, not limiting its scope to the patient's chief complaint of the day.

Local access to primary care is critical to assure prevention of illness, early detection of illnesses, early interventions and continuity of care.

Childhood preventive care services are a major focus of primary care. Children covered by Medicaid participate in the EPSDT program, which requires states to provide a comprehensive set of screening and early detection services. As shown in **Figure 40** and **Figure 41** beginning on page **32,** the analysis area rate of on-time visits for EPSDT services was 35.9% for the fourth quarter of 1999, while the statewide rate was 32.1%. Although children with Medicaid coverage living in the analysis areas are receiving preventive and screening services at a higher rate than other Medicaid covered children in CT, nearly two thirds of all CT children with Medicaid are not receiving mandated preventive services in a timely manner.

Compared to demographically similar rural areas, the combined analysis area exhibits rates of infections due to E. Coli that are higher than expected. Some of the individual analysis areas have rates of infections for Salmonella and Measles that are also higher than expected. In the Sharon analysis area, the unadjusted mortality rates for Death from All Causes, Malignant Neoplasms and Pneumonia and Influenza are higher than statewide. Middletown, Oxford and Sharon analysis areas have higher than statewide unadjusted rates for Cerebrovascular Disease. Middletown, Putnam and Sharon analysis areas have higher than statewide unadjusted rates for Chronic Obstructive Pulmonary Disease. Age adjusted mortality rates are shown in the respective chapters of this report corresponding to each analysis area. In summary, several conditions appear to be of concern for the entire rural area and for some towns in particular. **Attachment 1** displays the age adjusted mortality rates for each rural town

[42] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 31

[43] Joint Commission on Accreditation of Healthcare Organizations, *Comprehensive Accreditation Manual for Hospitals The Official Handbook,* Washington, D.C., 1996, LD8-LD12

[44] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 31

and analysis area. Increased education, screening services and accessible primary care could help reduce or eliminate these preventable conditions.

Prenatal Care

Prenatal care is medical and support care during the time of pregnancy and up to the time of delivery.

Prenatal care utilization is assessed using two risk indicators: "late or no prenatal care," which identifies mothers who did not receive care during the first trimester (13 weeks) of pregnancy; and "non-adequate prenatal care," which is a composite index reflecting both the trimester in which the first prenatal care visit was made and the total number of visits.[45] While the analysis areas in general report lower percentages of women with late, inadequate or no prenatal care than report this condition statewide, the rates are still very high, indicating lack of access for some rural residents. Particularly in the Sharon analysis area, the effect of insufficient prenatal care on the infant mortality rate can be surmised.

DPH has tried to improve access to prenatal care through several strategies, such as supporting sites for primary care and free pregnancy testing at family planning clinics. Further work is needed, especially in the rural areas studied.[46]

The reader should also refer to the *Safety Net Providers* section of this document, beginning on **page 37**, for information on the locations of Family Planning Clinics in CT. As shown in **Figure 59** on **page 45**, the availability of family planning clinics for rural residents is limited.

Obstetrical Services

Obstetrical care is medical and support care delivered during the time of pregnancy, through the delivery and the post partum period.

The birth rates for most of the analysis areas are lower than statewide and the birth rate for the combined analysis area is also lower than the statewide rate (11.34 vs. 13.16). However, the Redding analysis area has a higher birth rate than the other rural areas and CT. The birth rates for all the analysis areas and for the combined analysis area are shown on **page 29** in **Figure 35**. The teen birth percentage of total births is also lower than statewide in most of the analysis areas but the Putnam and Sharon analysis areas both have teen birth percentages higher than statewide, as shown in **Figure 37** on **page 30**. The Sharon analysis area also has a five year (1994-1998) infant death rate that is nearly double the statewide rate (10.03 vs. 5.33), but the other analysis areas have infant death rates that range from much lower than statewide to slightly higher, as shown in **Figure 39** on **page 31**.

The reader should refer to the *Demographic Data* section in each analysis area chapter for more detail.

Public Health Services

CT lacks the county based formal regional system of public health care delivery found in other parts of the United States.[47] In addition, the priorities for the CT Public Health System do not include the provision of services. Instead, LHDs and Health Districts concentrate on environmental testing and emergency preparedness. In some areas, such as the Northwest Region, private foundations are available to help fund the delivery of broad based

[45] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 6

[46] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 110

[47] *Safety Net Providers in Connecticut,* A Report to the Public Health Subcommittee of the Medicaid Managed Care Council of the CT State Legislature by the CT DPH, January 1998, as included in *Looking Toward 2000,* Appendix G, page 316

prevention and intervention programs. VNAs deliver much of what is, in other states, considered the responsibility of public health departments. While the VNAs are non-profit and community based, they do not have the level

of state funding that would allow them to address the obvious need in rural areas. However, without statewide emphasis on the delivery of preventive services, immunizations, education, perinatal services and screening programs, the CT rural safety net is fragmented, unpredictable, inconsistent and poorly implemented where it is in effect at all.

Mental Health Services

Mental health care encompasses a broad array of services, including preventive services (such as developmental and mental health screening), emergency services (including crisis intervention), case management, psychotherapy and counseling, medication management, psychiatric rehabilitation, day treatment and family support services.

Over the course of the past several years, the federal Center for Mental Health Services, in collaboration with a group of technical experts, has developed a model for estimating the number of individuals with mental illness. Data from two national studies, the National Comorbidity Survey and the Epidemiological Catchment Area Study, were used to determine the 12-month prevalence for those with a mental illness. Applying this model, the Department of Mental Health and Addiction Services extrapolated the number of adults within the state having a mental illness as follows:

- 5.1% of CT's adult population suffers from SMI (serious mental illness)
- Approximately half of those with SMI— 2.6% of the total adult population— have a severe and prolonged mental illness[48]

Although large numbers of mental health professionals were reported to be practicing in the analysis areas, focus group participants consistently indicated a lack of services and expressed concern for residents needing mental health care. The situation appears to be particularly difficult for young people, people without insurance and people of all ages who need non-crisis care. Providers attending focus groups indicated that they did not know how to access continuing mental health care for their patients or that the sources of which they were aware were overburdened with current cases and not accepting new referrals. Unfortunately, while crisis intervention services appear to be available through hospital emergency departments and state funded mental health agencies, readily available preventive and low level services such as counseling that could help reduce the number of people developing a crisis are lacking. School personnel attending focus groups were well informed about options but indicated that they could not get the attention of state officials unless a child was threatening potential harm to him/herself or others.

One example of the situation that presents risk to CT residents and creates higher costs for taxpayers is given in notes from a focus group held by the Torrington Area Health District in late 1999. The situation described involves a mother who requires a medication to control emotional difficulties. Because she has no insurance, when she cannot afford to pay for the medication and suffers emotional upheaval as a result, the children must be placed in foster care.[49]

The State of CT would be well advised, both in terms of the mental stability of its citizens and appropriate use of state funds, to develop programs that would assure improved access for its underserved residents. Due to transportation difficulties for the target population, services must be developed within the local communities in order to have an impact on access for those most in need. In February 2000, a report on the delivery and financing of children's behavioral services in CT, prepared for the DSS by The Child Health and Development Institute of CT, was presented to the CT General Assembly. According to this report, 82% of the children receiving behavioral health services in FY99 (fiscal year) received those services in their homes and communities. However, 70% of all behavioral health dollars spent in CT were spent on hospitals and residential treatment.[50]

[48] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 302

[49] Torrington Area Health District Maternal-Child Health Focus Group Notes, December 7, 1999

[50] *Delivering and Financing Children's Behavioral Health Services in Connecticut*, Technical Appendix, page 16

In 1974, CT consolidated services for children within the DCF. The goals at that time were to elevate children's issues and services within state government and to integrate service delivery. Due to a later requirement to increase the departmental emphasis on children with need for protective services, the goal of integration has not been fully realized.[51]

Dental Care

Dental diseases and conditions are among the most prevalent and preventable chronic health problems, and dental caries remains the single most common disease of childhood that is not self-limiting or treatable with antibiotics. Dental disease is an infectious disease process that can reduce overall health, productivity and quality of life.[52]

A severe lack of access to dental care exists for CT's Medicaid eligible children. The 1996 prevalence of dental decay in CT 6-8 year old children was approximately 55%, compared to 54% nationally. Prevalence rates for baby bottle tooth decay, caused by improper feeding practices, were 25% in children enrolled in Head Start in the city of Hartford and 20% in the towns of northwestern CT.[53]

Access to dental services remains a significant problem. The problem exists in all Medicaid managed care networks and has been substantiated by recent surveys. A survey by DPH estimated that 40% of dentists participating in the fee-for-service Medicaid program intended to resign when the managed care program was implemented. Random phone calls to dental provider offices by DSS staff documented difficulty in scheduling appointments with dental providers. The outcome of the Children's Health Council satisfaction and utilization surveys showed that more access problems occurred with dental care than any other type of specialty service.[54] Additionally, it found that even those dentists who participate in Medicaid may do so on a limited basis. Nearly 80% of the participating dentists were not accepting additional Medicaid children. The providers cited burdensome paperwork and related administrative requirements, patient non-compliance and dental fee reimbursement rates as reasons for non-participation.[55] It is unclear whether a more significant increase in reimbursement rates would have helped solve the access crisis for managed care enrollees. In other words, if the CT Medicaid program paid 95% of fee-for-service insurance reimbursement, would more dentists participate? Although administrative complexity and cultural issues are being addressed, discussions regarding reimbursement rates are more complex. Most participating plans reimburse dentists at the level of Medicaid fee-for-service rates, which are approximately 55% of private rates for children and 35% for adults.[56] Interestingly, a previous rate increase in 1993 by DSS had the effect of increasing the number of services provided by participating dentists, but did not increase the number of dentists participating in the program.[57] Therefore, it is unclear if more significant reimbursement rates would have helped or would now help solve the access crisis for managed care enrollees.[58]

[51] *Delivering and Financing Children's Behavioral Health Services in Connecticut*, Technical Appendix, page 5-6
[52] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 152
[53] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 9
[54] Maximus, Inc., *Summary Report: Medicaid Client Utilization and Satisfaction Survey*, Prepared for the Children's Health Council, 1996
[55] Wolfe SH, *Present and Projected Dental Provider Participation in the Connecticut Medicaid Managed Care Program: Impact on Dental Care Access,* Hartford: CT DPH; February 1997
[56] Andrews E., Memoranda summarizing dental rates, Prepared for the Medicaid Managed Care Council, April 18, 1997
[57] CT DSS, Memoranda on the impact of pediatric dental fee increases, April 13, 1995
[58] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999 page 59

Another analysis showed that only 24% of Medicaid-enrolled children in CT were screened for dental services during federal fiscal year 1996, and the rate of dental decay for 6-8 year old Medicaid enrollees was 21% higher than the national average.[59]

Both consumers and providers who attended focus groups held for this study confirmed the results of these previous analyses. Access to dental care is an issue that was brought up by participants in every analysis area, with particular concern expressed for Medicaid recipients, low income individuals, the uninsured, the elderly and anyone without reliable transportation.

Home Health Services

Home health is the provision of nursing care and supportive services in the residence of the patient.

Home health care services doubled from SFY91 to SFY95. Projections indicate that the need for services could double again by 2005.[60]

At the same time that demand has increased, the range of services offered through home health care has also expanded, resulting in a multifaceted source of services ranging from intravenous infusion of medications to physical therapy. Home-based services are by definition provided in the home, but home health agencies also provide community-wide programs such as immunization, sometimes through arrangements with other types of providers.

The **CHCP** is an alternative for individuals at risk of nursing facility placement. The informal services provided most frequently to CHCP clients include financial management, household management, supervision, shopping, personal care and safety checks.[61] The CHCP, which is the primary vehicle used by the State to provide home and community-based services to frail people aged 65 and older, consumed less than 1% of the State General Fund budget.[62]

CTLC Program is a recent innovation offered by the CT DSS for adults over age 55 who qualify for nursing home placement. The program is modeled after a national pilot program known as PACE. Individuals with household incomes up to 300% of the Supplemental Security Income level qualify for support services designed to help them remain in their own homes. Teams at the Lifelong Care Centers, located in local communities, will provide health care services using a case management approach. While services will be covered by Medicare and/or Medicaid, a wider range of social and supportive services are offered than are covered under these traditional public programs. Unfortunately, this program is not yet available to rural residents since the first two sites are located in Hartford and New Haven.

Focus group participants in both the Putnam and Middletown analysis areas expressed concern that home health providers could not compete with the casinos in their area for the lower paid employees that they need as aides and support staff. Because the casinos pay relatively high wages, offer good benefit packages and often provide transportation, the agencies cannot compete on an even footing.

[59] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 287
[60] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 16
[61] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 241-242
[62] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 75

Physician Specialty Services

Specialty services are those provided by physicians who focus on, and limit their practice to, certain body systems, age groups or categories of diseases.

The health care system has, over the past several years, become more and more specialized. Primary care providers offer the continuity of care needed on a routine basis and serve as gatekeepers for referral to specialty providers for managed care plans. Specialty physicians tend to cluster in communities with larger populations, larger and more sophisticated hospitals and around teaching institutions. While these advances in specialized care and centers of care bring state of the art care, the specialists are often distant and difficult to access for rural residents, especially for those without transportation. In response, smaller communities attempt to retain certain types of specialists in order to enhance access to services and secure market share for their institutions.

The analysis areas studied vary considerably in the supply of specialist physicians available to residents. The New Milford, Norwich and Oxford analysis areas are lacking physicians in all specialties except the category of All Other. Middletown is lacking specialists in Cardiovascular Diseases and Otolaryngology. Putnam analysis area is lacking specialists in Cardiovascular Disease, Dermatology, General Surgery, Neurology, Otolaryngology and Urology. Redding analysis area is lacking specialists in Cardiovascular Disease, Neurology, Ophthalmology, Orthopedic Surgery, Otolaryngology and Urology. Sharon analysis area is lacking specialists in Cardiovascular Disease and Windham analysis area is lacking specialists in Cardiovascular Disease, Dermatology and Neurology.

Physical Therapy Services

PT (Physical Therapy) is the provision of assistance to patients who are disabled by illness or accident, or who were born with a disability, through the planning and implementation of programs to help these people gain strength, flexibility, endurance, coordination and overall physical functioning. PT providers attempt to reduce pain caused by injury or illness through movement exercises, heat, cold, electrical stimulation, water treatments and assisting devices.

Often, patients may be discharged from acute care earlier than otherwise possible when PT is available. Even a patient who was admitted to a hospital outside the analysis area for a procedure such as hip replacement may return to the home community earlier, or avoid long trips for follow up services, if PT services are available, either in the home or nearby, during recovery.

This analysis found large numbers of physical therapists reported as practicing in the rural towns. Focus group attendees did not appear to consider lack of PT services as an access issue.

Acute Care

Acute care services are those requiring admission to a hospital, diagnosis and active treatment of an individual with a medical condition requiring the direction or supervision of a physician and the nursing and equipment resources of an inpatient facility.

As reported in *Looking Toward 2000—An Assessment of Health Status and Health Services,* Chapter IV:

> "More than 50% of CT's hospitalizations and 60% of the charges were publicly funded in 1995. Medicare was the payer with the largest percentage of hospitalizations (36%)… Medicare's hospitalizations accounted for 51% of the total charges. These proportions climb to 49% of hospitalizations and 56% of charges when birth-related hospitalizations are excluded… Medicaid, the third largest payer, accounted for 16% of the hospitalizations and 13% of the charges. Medicaid was the expected payer for 63% of HIV/AIDS hospitalizations, 53% of the alcohol/drug abuse or dependence hospitalizations and 37% of asthma hospitalizations."[63]

The future need for acute care services indicates an overall service reduction, particularly for medical/surgical services, but a somewhat greater need for intensive services such as provided in intensive care, coronary care, or neonatal intensive care units.[64]

Under managed care, hospitals are viewed as "cost centers" and therefore routine treatments are being shifted to outpatient or alternative settings like ambulatory surgery centers. While the trend may be fueled by incentives related to managed care, such as changes in hospital reimbursements and growth in the utilization of hospital outpatient departments, advances in technology such as new surgical techniques that allow less invasive procedures and advances in anesthesiology and pain control, also make this change possible. Inpatient utilization is expected to continue to decline particularly for surgical inpatient days, births and mental health care. This trend resulted in new laws dictating lengths-of-stay for particular services.[65]

Projected patient days and ADC by service for CT residents for the years 2000 and 2005 have been prepared by DPH. These projections should be considered a base for further planning, since they are driven primarily by demographic changes. The projections show no need for additional *licensed* beds in the state through the year 2005.[66]

While most analysis area residents have hospitals within thirty minutes, some outlying towns are farther from an acute care facility. Also, many rural residents lack transportation and, as discussed in the *Nonemergency Transportation* section of each chapter of this document, transportation resources available to rural residents are extremely limited, available only for elderly and disabled individuals in some areas and totally unavailable in some towns. The only analysis area with apparently good coverage for rural residents is the Middletown analysis area.

[63] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 217-218

[64] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 15

[65] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 51

[66] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 230-231

Emergency Department Services

EDs (Emergency Departments) are designed to offer evaluation, stabilization and initial treatment of illnesses or injuries requiring immediate intervention. However, EDs often become the only provider of care for low income and/or uninsured individuals because EDs are the only health care providers with a legal requirement to provide emergency care regardless of a patient's insurance coverage or ability to pay. While excellent care is provided in EDs, emergency-trained providers are not the ideal source of primary and continuing care because their training is focused on episodic rather than longitudinal care.

Patients whose only source of health care is an ED lose the continuity established by repeat visits to the same primary care practice, where the staff become familiar not just with the patient's medical history, but with the social and cultural environment in which the patient functions and can take these factors into account when establishing preventive care goals or treating a condition. The goal of an ED provider is to treat the presenting problem quickly and move on to the patient with the next most urgent need. In the ED environment, the connection to the patient's history and environment is lost. Furthermore, a system of health care delivery that does not provide resources and increase access to timely and comprehensive primary care for the most financially needy residents, creates a situation in which costs escalate due to the high cost of maintaining 24-hour/7 day services with highly trained personnel available. Thus, when the underserved seek treatment in EDs, taxpayers bear the burden through state subsidies to hospitals for the provision of uncompensated care.

This study also found that CT lacks an organized, centralized data collection and reporting process for ED activity. Thus, it is difficult to assess the level of appropriate or inappropriate ED usage. Improved monitoring and reporting could supply the information needed to compare utilization among various regions and between urban and rural areas.

Emergency Ambulance Transportation

The EMS system in CT is organized on three levels consisting of the state, regions and local communities.[67]

The planning, development and administration of the statewide EMS system is carried out by DPH. The EMS delivery system includes 276 prehospital care providers, 68% of which are volunteer ambulance companies and volunteer fire departments. Nine hospitals are designated trauma facilities; four of these trauma centers are located in the combined analysis area. **Figure 60** displays the hospitals that have trauma centers, the analysis area it is located in or near and the analysis area towns that are surrounding the hospital.

Figure 60: Hospitals with Trauma Centers in Combined Analysis Area

Hospital	Location	Hospital Location Is In or Near	Analysis Area Towns Surrounding Hospital with Trauma Center
The William W. Backus Hospital	Norwich	Norwich	Bozrah, Franklin, Lisbon, North Stonington, Preston, Salem, Voluntown
The Danbury Hospital	Danbury	Redding	Newtown, Redding, Weston
Sharon Hospital, Inc.	Sharon	Sharon	Canaan, Cornwall, North Canaan, Salisbury, Sharon
The Charlotte Hungerford Hospital	Torrington	Torrington	Barkhamsted, Burlington, Colebrook, East Granby, Goshen, Granby, Hartland, Litchfield, Morris, New Hartford, Norfolk, Suffield, Torrington

Source: American Hospital Association *Guide*, 2001 Edition

[67] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 260

Although a trauma registry exists, a statewide prehospital data collection system is still lacking in CT. This lack of data collection makes the collection of information for studies very difficult. For example, no central or regional source of information was located for the number of ambulance runs made and/or the acuity of patients transported. Although the CT-SORH conducted a survey of emergency transportation providers, many of the local ambulance services did not report the number and type of volunteers or the number or type of runs made. Several ED directors were contacted in an effort to collect some data on this service, but the consultants were consistently told that information on emergency transfers is not monitored or reported. As a result, much of the emergency transportation analysis in this report is based on estimated usage.

The regional level of EMS acts as the liaison between state and local efforts. Five defined EMS regions, which are identical to the CT USRs, are represented by EMS councils. These councils serve as authorized extensions of the State in performing delegated state functions and in implementing state policy and programs at the regional and local level. The councils develop regional implementation plans that complement the state plan, provide technical assistance and serve as a voice for the local communities concerning all EMS issues.[68]

The local EMS infrastructure is responsible for providing services or contracting for the needed EMS in the community. The EMS delivery system includes prehospital care providers, hospital EDs and specialized hospital facilities. In CT, 276 commercial, municipal or volunteer providers served the public's need for prehospital EMS in 1997. Over 40% of these providers are volunteer fire departments and one-quarter are volunteer ambulance companies.[69]

Nonemergency Transportation

Nonemergency transportation is the organized provision of scheduled transportation, primarily for health care services but not for conditions that create an emergency.

A 1997 study sponsored by the American Association for Retired Persons reported the following mobility characteristics of older Americans:

- Approximately 27% of people over the age of 75 do not drive
- Older people who do not drive take three times fewer trips—an average of only two trips per week compared to seven per week for those who do drive
- Only 23% of non-drivers take existing public transit or a transportation service offered by a non-profit organization
- Half of non-drivers cannot walk to the nearest bus stop[70]

In addition to the elderly, there are several other populations that are not necessarily mobile. The most direct measure of lack of transportation as a barrier to accessing healthcare services is the number of households without vehicles. One study estimates that within the welfare recipient population affected by the 1996 Personal Responsibility and Work Opportunity Reconciliation Act, only 6% own automobiles and 20% has some kind of disability.[71]

[68] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 260
[69] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 260
[70] Northeast CT Transportation Situation Analysis, Eastern AHEC, Inc., December 1999, page 6
[71] Schlossberg, Marc, "The Future of Human Services Transportation: A Coordinated Approach, April 1999

Even existing services can be inaccessible in a meaningful way. For example, the Dial-A-Ride program is available in some of the analysis area towns and is primarily designed to meet the needs of elderly and disabled residents. A CT study of Dial-A-Ride type programs found that:

- No state agency has responsibility for program oversight because there is no state mandate for nonemergency transportation programs
- No single funding source exists, instead funding is a patchwork of federal, state and local funds
- Multiple delivery models exist making identification of programs problematic
- The provision of Dial-A-Ride services for the elderly is largely driven by local concerns and delivered by municipalities or transit districts[72]

Medicaid recipients receive transportation to receive medical services as a benefit. Medicaid clients in MCO (managed care organizations) can receive transportation benefits through arrangements made by the MCOs. DSS makes other transportation arrangements for Medicaid clients not enrolled in managed care. Some organizations will make arrangements for patients who fit the organization's service mandate. For example, the American Cancer Society will arrange rides for patients with cancer, schools are required to arrange transportation for students with developmental delays and Department of Mental Retardation provides transportation for its clients. Dial-A-Ride programs serve elderly and disabled residents of some towns, but availability is limited in the rural areas studied. Residents who do not have their own means of transport to primary care visits and other health related services, and who do not fit a special category, have only limited access to low cost transportation.

Long Term Care

The DPH licenses two categories of nursing facilities in CT: CCNHs (chronic care nursing homes) provide skilled nursing and/or rehabilitative care and RHNSs (rest homes with nursing supervision) provide custodial care. The average length of stay in a nursing facility is 824 days (2.2 years). In 1995, utilization was defined as patient days per 1,000 population. Projected bed requirements for the year 2000 and for the year 2005 were made by first determining the ADC of CT residents and then adjusting for out-of-state requirements and environmental trends that are expected to affect utilization. In addition, a target occupancy of 97.5% was assumed, as cited in Public Act 95-160 amending CT General Statutes, Section 17b-355.[73]

A moratorium on new nursing facility beds in CT has been in effect since 1991 and is scheduled to remain in effect until 2002.[74] The goal of the moratorium is to reduce nursing facility utilization. While the total number of licensed beds has remained stable, the proportion of RHNS beds is decreasing. The loss of RHNS beds can be attributed primarily to the conversion of RHNS beds to the higher CCNH level of care. The decrease in RHNS beds may affect access to nursing facilities by those in need of less intensive nursing care. Nevertheless, the State Nursing Home Task Force has recommended continuing the moratorium, which is scheduled to remain in effect until 2002.[75]

Projections indicate that by the year 2000, 412 fewer nursing facility beds will be required than were available in 1995. However, these projections also predict a deficit of 174 RHNS beds, with a bed deficit in all regions except the South Central USR. There will also be a deficit of CCNH beds in the Southwest, Eastern and Northwest USRs. By 2005, a deficit of 36 CCNH beds and a deficit of 229 RHNS beds is projected statewide.[76]

[72] Legislative Program Review and Investigations Committee
[73] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 242
[74] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 4
[75] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 75
[76] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 244

The availability of public funds for long term care influences the services available and the settings in which they are delivered. Funding mechanisms favor institutional care with fewer resources applied to home and community-based services. Community-based services, often necessary to prevent institutionalization, may only be provided by public sources through a federal waiver of the Medicaid program.[77]

In CT, the majority of long term care resources are used to pay for institutional care (more than 8% of the State General Fund budget in FY 1995). The CHCP, which is the primary vehicle used by the State to provide home and community-based services to frail people aged 65 and older, consumed less than 1% of the State General Fund budget.[78]

Focus group participants in both the Putnam and Middletown analysis areas expressed concern that nursing homes could not compete with the casinos in their area for the lower paid employees that they need as aides and support staff. Because the casinos pay relatively high wages, offer good benefit packages and often provide transportation, the agencies cannot compete on an even footing.

[77] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 75

[78] CT DPH, Office of Policy, Planning and Evaluation, *Looking Toward 2000—An Assessment of Health Status and Health Services,* 1999, page 75

Overview
Summary of Findings

Summary of Findings

- The percentage of children (under age 18) living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
22%	21%	23%	25%	26%	24%	21%	24%	26%	23%

- The percentage of young adults (age 18-24) living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
8%	7%	9%	8%	8%	8%	6%	7%	9%	9%

- The percentage of adults (25-64) living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
55%	53%	56%	54%	52%	57%	52%	54%	57%	54%

- The percentage of elderly (age 65 and over) living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
15%	19%	12%	13%	14%	11%	21%	15%	9%	14%

- The concentration of Caucasians living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
96.44%	96.50%	96.34%	94.20%	96.50%	94.94%	96.58%	96.16%	96.18%	80.95%

- The concentration of African Americans living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
0.76%	0.58%	0.87%	1.19%	0.66%	0.90%	1.49%	1.21%	0.92%	8.38%

- The concentration of Native Americans living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
0.13%	0.21%	0.36%	0.17%	0.37%	0.12%	0.12%	0.14%	0.21%	0.18%

- The concentration of Asians living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
1.10%	1.26%	0.97%	2.64%	1.00%	2.01%	0.84%	1.33%	1.08%	2.24%

- The concentration of Hispanics living in the analysis area is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
1.49%	1.41%	1.40%	1.69%	1.40%	1.98%	.90%	1.11%	1.56%	8.08%

- The percentage of individuals with incomes below 100% FPL is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
3%	3%	3%	2%	6%	2%	6%	3%	3%	7%

- The percentage of individuals with incomes below 200% FPL is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
9%	8%	11%	8%	20%	6%	16%	11%	9%	16%

- The March 1999 unemployment rate for the analysis area was:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
2.3%	2.2%	3.0%	2.3%	3.7%	1.7%	1.1%	2.6%	2.3%	3.2%

- The percentage of residents enrolled in HUSKY A is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
1.92%	1.57%	3.13%	1.62%	6.35%	1.07%	3.60%	3.37%	2.04%	7.05%

- The estimated percentage of residents enrolled in Medicare Managed Care is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
16.19%	21.13%	1.68%	25.13%	1.25%	16.20%	16.20%	18.45%	13.79%	20.04%

- The estimated number of uninsured individuals (based on the state rate of 12.6%) is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
11,969	5,507	3,051	2,773	8,204	5,060	1,656	12,106	7,094	412,000

- The 1997 birth rate per 1,000 residents is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
12.25	9.82	10.78	9.90	11.35	14.34	8.29	10.95	11.01	13.16

- The 1997 teen birth percentage of total births is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
2%	4%	7%	2%	13%	1%	13%	5%	4%	12%

- The analysis area rate for late or no prenatal care is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
6.44%	5.13%	7.66%	6.42%	8.66%	3.12%	11.93%	5.04%	7.42%	10.09%

- The analysis area rate for inadequate prenatal care is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
9.28%	6.99%	8.81%	7.34%	10.55%	3.99%	23.85%	7.70%	11.61%	12.57%

- The five year (1994-1998) infant death rate per 1,000 live births is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
6.1	0.9	5.8	5.1	8.0	3.6	10.0	4.6	5.6	7.2

- The rate for on-time preventive care for Medicaid recipient children is:

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
42.8%	29.8%	32.0%	38.1%	31.8%	32.0%	32.3%	38.0%	41.8%	32.1%

- The rate at which infections due to E. Coli are occurring in the county or counties in which the analysis area is located is higher than expected when compared to peer counties (based on data only available at the county level).

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X		X	X	X	X	N/A

- The rate at which infections due to Salmonella are occurring in the county or counties in which the analysis area is located is higher than expected when compared to peer counties (based on data only available at the county level).

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X		X	X	X	X	X	X	N/A

- The rate at which Shigella is occurring in the county or counties in which the analysis area is located is higher than expected when compared to peer counties.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X					X	X		N/A

- Some analysis area towns report a higher than statewide age adjusted mortality rate for All Causes of Death.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X		X		X	X	X	N/A

- Some analysis area towns report a higher than statewide age adjusted mortality rate for Diseases of the Heart.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X		X	X		X	X	N/A

- Some analysis area towns report a higher than statewide age-adjusted mortality rate for Malignant Neoplasms. (All towns had fewer than 11 deaths and/or no reported data.)

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
									N/A

- Some analysis area towns report a higher than statewide age adjusted mortality rate for Cerebro-vascular Disease.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X				X	X		X	X	N/A

- Some analysis area towns report a higher than statewide age adjusted mortality rate for Chronic Obstructive Pulmonary Disease.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X				X		X	X		N/A

- Some analysis area towns report a higher than statewide age adjusted mortality rate for Pneumonia and Influenza.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X			X		X	X		N/A

- There are no VNAs in the analysis area offering visiting nurse services.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X		X			X	N/A

- There are no VNAs in the analysis area offering well child clinics.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
		X	X	X			X		N/A

- There are no SBHCs in the analysis area towns.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X		X	X	X	X	N/A

- There are no CHCs in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X		X	X	X	X	N/A

- There appears to be a shortage of primary care physicians in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X							N/A

- There appears to be a shortage of Prenatal and/or OB/GYN physicians in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X		X		X	X	N/A

- There are no Family Planning Clinics in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X		X	X		X	N/A

- The analysis area does not have a Primary Care HPSA or HPSP designation.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X	X	X	X	N/A

- The analysis area does not have a Primary Care MUA or MUP designation.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X		X		X	X		X	N/A

- There appears to be a shortage of mental health providers in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
		X		X					N/A

- The analysis area does not have a mental health shortage designation.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X	X	X	X	N/A

- There appears to be a shortage of dental providers in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
		X							N/A

- There are no public health dental services or dental safety net providers in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X	X	X	X		X	N/A

- The analysis area does not have a dental shortage designation.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X	X	X	X	N/A

- There is insufficient data to assess whether there is a shortage of home health providers in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X	X	X	X	N/A

- There appears to be a shortage of physicians practicing certain specialties in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X	X	X	X	N/A

- There appears to be a shortage of physical therapy providers in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
									N/A

- The supply of acute care beds does not appear to be adequate in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
									N/A

- Emergency Department coverage does not appear to be adequate in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
			X		X		X	X	N/A

- Data needed to assess the adequacy of emergency ambulance transport was unavailable.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X	X	X	X	X

- Nonemergency transportation availability does not appear to be adequate in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
	X	X	X	X	X	X	X	X	N/A

- The supply of long term care beds does not appear to be adequate in the analysis area.

Middletown	New Milford	Norwich	Oxford	Putnam	Redding	Sharon	Torrington	Windham	State
X	X	X	X	X	X				N/A

Overview
Recommendations

Recommendations

In general, CT would be well advised, both in terms of the health of residents and appropriate use of state funds, to develop programs that will help improve access to health care services for residents who are currently underserved. Due to limited availability of transportation in rural areas, new service points within the rural areas must be developed or current resources outside the rural analysis areas must be made accessible through improved transportation systems in order to increase utilization by those most in need.

Data Collection

DPH, OHCA, or some other state agency needs to take the lead in defining a set of common health related data elements to be collected statewide and in standard formats. In order to study provider supply, a minimum set should include: actual total and patient care hours offered at each practice site and in each specialty for each provider, primary and ancillary services offered at each location, third party payors accepted by each practice, the percentage of total patient charges billed to each third party, the percentage of time devoted to inpatient or other residential care by each provider at each location, FTEs of allied health professional staff at each practice site, FTEs of physician extender staff at each practice site, information on the places where patients of each practice live and any age or other limitations on patients accepted into the practice.

In addition to more complete information on availability of provider resources, there are other data areas that need attention. Again, a state agency or department needs to take the lead in defining the need and establishing data collection and distribution methods. For example, data on EMS utilization is spotty at best. The submission of basic utilization data for these services is required to renew annual licenses. However, the data is apparently not collected in a manner that allows it to be accessed other than as a written history of a particular agency or organization. Health planners will need to know, at a minimum: what groups are transporting patients, for what purposes are people transported (for example, from a nursing home for dialysis at the hospital or to an ED for treatment), to what locations are people being transported and what level of personnel are doing the transporting.

ED utilization should be analyzed. An examination of the acuity level and insurance status of patients using rural EDs could help health planners understand whether all residents in an area lack access to primary care or only certain groups. Additional research into the hours during which patients with low acuity conditions visit EDs could provide guidance regarding whether patients lack access to primary care after normal working hours or at all times of the day.

Because vulnerable populations are groups of people who are at risk of either higher need for health services and/or restricted access to those services, actual counts of vulnerable populations in the rural areas should be conducted. The counts shown in this report are estimates, based on county levels for each factor. While the results give some indication of the number of people in each analysis area who may be vulnerable, the actual number is unknown.

Because lack of dental and mental health care, particularly for low income residents and Medicaid recipients was repeatedly mentioned by focus group attendees, further investigation of the availability of these services for these groups should be examined.

Regular assessments should also collect data on the number of uninsured residents in each area. An additional project might be to find out why residents are uninsured. While it may seem obvious that people lack insurance because they do not have access to it at a cost they can afford, this is not always the reason for lack of coverage. In fact, some people who can afford coverage are uninsured because they have chosen to take the risk of paying for needed care themselves rather than insure themselves against the risk. An additional interesting project would be to assess the number of residents who are underinsured and why they are not carrying full coverage.

All of this information should be routinely updated and published or otherwise made available to health planners and researchers for further use. Priorities for improving the health care service delivery systems in a planned and efficient manner cannot be identified until up-to-date and complete information is routinely available.

Once reliable local information is being routinely collected, collated and made available for further analysis, the utilization predictions in the *Market Assessment* sections of this report should be recalculated using the more detailed information that will be available.

Data Use

Age-adjusted mortality rates should be calculated for groupings of towns since the rural towns are too small and have too few occurrences to provide statistical reliance. It is probably unnecessary to do this more often than every five years because the rates will not change very much over short periods of time.

Further analysis should be done with a goal of understanding why enrollment in various HUSKY programs in the analysis areas is lower than would be expected based on the number of residents with low household income levels. Because eligibility for the programs is based on different income levels for different age groups, a direct correlation does not exist between income and HUSKY enrollment. However, common sense would seem to indicate that in an area such as the Putnam analysis area, where 20% of the population is living in households with incomes below 200% of the FPL, more than 6.35% of the population would be taking advantage of the HUSKY A program. This discrepancy between low income levels and HUSKY enrollment is common to the rural analysis areas. Among the possible reasons for low enrollment that could be examined are: lack of marketing in rural areas, lack of understanding of the marketing materials due to limited English ability, resistance to participation in government programs in rural areas and/or enrollment locations and/or times are inconvenient for rural residents who lack transportation.

Shortage Designations

Prior to the institution of expanded and improved data collection at the state level, actual practice information for several service types should be collected through provider surveys. This information should be used to confirm whether there are actual shortages in the analysis areas that appear to have shortages of primary care, dental and/or mental health providers. After confirming shortages by totaling provider FTEs available both to the total analysis area and to special populations such as low income residents, applications for shortage designations should be prepared and submitted to the federal Division of Shortage Designation.

If shortages of primary care providers are confirmed through a survey process, shortage designations could be used to establish eligibility for many of the programs and incentives mentioned in this report such as: recruitment of NHSC providers, applications for CHC funding, Medicare bonus payments for private physicians and applications for FQHC look alike status for existing state funded health centers.

The availability of safety net and/or public health dental providers to serve low income residents and Medicaid recipients is extremely limited in the rural areas examined. While resources may be available outside the rural towns, the nonemergency transportation needed to reach those services is not generally available. Additional provider data should be collected, the resource supply for specific populations should be analyzed and applications to designate populations with a shortage of dental services should be pursued. Shortage designations can help address shortages by providing eligibility for the funding of new dental clinics and for recruiting dental providers through the NHSC.

Most of the analysis areas appear to have an excess of mental health providers. However, focus group attendees repeatedly mentioned mental health, particularly for low income children and for those who need early intervention rather than crisis intervention as a need in their areas. All types of mental health providers, from psychiatrists to social workers and substance abuse counselors, should be surveyed. At a minimum, the goal of the survey should be to ascertain actual FTEs available from each category of mental health professional, types of conditions treated by each professional, third party pay sources accepted by each professional and the amount of time devoted to inpatient care by each professional. Once this base data is collected, the results can be analyzed and if

some areas or population groups are suffering from shortages of this type of service, shortage designation applications should be submitted.

Increasing Provider and Service Availability

DPH should investigate the possibility of providing incentives for providers to practice, at least part-time, in the rural areas of the state. Increased education, screening services and accessible primary care could help reduce or eliminate the preventable conditions that result in mortality rates in the rural areas of CT that are higher than statewide for some causes of death.

Providing mandated preventive services in a timely manner to Medicaid children should be a high priority for CT. Perhaps providing an incentive, such as increased funding for VNAs to establish additional well child clinics, would improve results. Caseworkers could also be employed to contact parents and coordinate transportation.

CT health planners should develop strategies to improve participation in prenatal care services and ensure compliance with regular prenatal care visits rather than merely reporting data on the numbers of women who enter prenatal care at each stage of pregnancy. Some of the options to examine are: arranging for more frequent public maternal health clinics, offering clinics at more sites in rural areas and coordinating the scheduling of maternal health clinics with well child clinics that are well attended. Some families can afford to maintain only one car, which is used by the wage earner during working hours. Clinics offered outside normal business hours might attract more attendees when the family car and child care from other family members are more likely to be available. Another approach is for the state to supply case workers charged with follow up calls and/or visits to mothers who miss prenatal appointments. This follow up activity could also be used to collect data on why pregnant women are not attending clinics or seeing private providers when scheduled.

Improving Third Party Coverage

Regulations regarding entities allowed to process Medicaid applications should be broadened. For example, currently, the CCHCI (CT Community Health Care Initiative), formerly Healthy Start, sites are not allowed to assess or enroll potential Medicaid recipients. Training and other incentives should be offered to induce provider organizations, schools and especially CCHCI and CHC sites to process Medicaid enrollments. Enrollment assistance should also be advertised through radio advertisements, signs on public buses and notices in school newsletters and other outlets that have a good chance of reaching the rural underserved and uninsured populations. Medicaid applications and informed assistance should be readily available at SBHCs, CHCs, VNAs and other sites where potential enrollees gather and/or receive health services.

As this report and plan was being finalized, the U.S. Congress passed the Medicare, Medicaid, SCHIP Benefits Improvement and Protection Act of 2000. This Act includes funds to increase state efforts to support additional enrollment personnel and sites, such as school personnel at schools, for Medicaid and SCHIP programs. While no details about the regulations covering these funds are available at this time, CT should plan to apply for and use federal dollars to increase the ease of access to its Medicaid and SCHIP programs by placing eligibility workers at easily accessible sites in rural areas or by training local health care workers to make eligibility determinations.

Other

Nonemergency transportation availability should be improved. A state department should be identified to take the lead in implementing additional systems and funds should be allocated. Although some of the analysis areas have better arrangements than others, transportation was brought up as an issue in every analysis area for at least some residents. Fixed route buses that operate only on major highways do not address the needs of rural people. Dial-A-Ride programs serve parts of many analysis area towns, but the priority for these programs is to serve elderly and disabled residents, leaving other residents who do not have their own transportation without resources. Additionally, these services do not provide a good means of accessing doctor's offices, clinics and other routine services because lengthy trips with many stops are common and return trips often require long waits for a car to return. Only the Middletown Analysis Area was found to have a well established and responsive system that is available to all residents. Perhaps the local agencies in this area could assist other areas with development of systems that more closely match need.

Infections such as E. Coli, Salmonella and Hepatitis A are occurring at rates that are higher than expected when counties in which analysis areas are located are compared with peer counties. All of these conditions often result from poor food handling and/or poor water quality. Since monitoring environmental quality is part of the charge for DPH, further investigation should be initiated. If the indications based on peer county comparisons done by HRSA are found to warrant intervention, control activities such as restaurant inspections and sanctions for regulatory non compliance should be started. Another possibility would be for DPH to set its own expectations, based on local factors, monitor occurrences and intervene with regulations and/or sanctions when appropriate.