One Coast, One Future

SOUTHWEST CONNECTICUT
ECONOMIC INTEGRATION INITIATIVE

Health Care Workforce Initiative

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Business Council of Fairfield County

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One Coast, One Future

One Coast, One Future is a consortium formed by the Bridgeport Regional Business Council and The Business Council of Fairfield County. The initiative is funded by a nearly $1,000,000 federal grant secured by Congressman Christopher Shays (R-CT).

One Coast seeks to spark new and renewed growth through cooperative, yet locationally appropriate efforts. The goal is to stimulate economic growth, job creation and individual economic opportunity by linking the Southwest Connecticut region's business centers in a new and stronger alliance for their mutual benefit.

One Coast's long-term plan consists of six key objectives, including a Comprehensive Economic Development Strategy (CEDS); development of a marketing campaign focused on development and housing opportunities; development of a marketing campaign focused on cultural and entertainment opportunities; creating a growth strategy for jobs in health care; linking employer needs with available employee skills through a JobsNet; and creating a wi-fi network in city centers.

One Coast, One Future projects began in 2006. The One Coast, One Future Health Care Industry Cluster Study aimed to assist municipal governments, regional organizations, and economic development leaders in their efforts to include health care services, facilities, providers and related businesses in their respective planning processes. The current Health Care Workforce Initiative resulted from a recommendation of the Health Care Industry Cluster Study as a step towards addressing regional and statewide shortages across several health care occupations.

The Business Council of Fairfield County

The Business Council of Fairfield County (formerly known as SACIA) was formed in 1970 by business leaders engaged in the effort to build more livable, workable communities. The Business Council is governed by a board of directors comprised of senior business executives and served by a professional staff.

For over three decades, The Business Council has mobilized Fairfield County's business, political and community leadership around issues critical to the region's viability as a business destination. As we navigate in this new millennium, The Business Council's leadership and expertise continue to be put to work in the areas of transportation planning, legislative advocacy, higher education, economic data collection and analysis, professional development, business leadership and non-profit capacity building.

The Business Council is the coordinating body for the One Coast, One Future Health Care Workforce Initiative.

One Coast, One Future Health Care Workforce Initiative Steering Committee

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Executive Summary

I.   Background

Purpose – One Coast, One Future is a regional initiative formed in 2005 by The Bridgeport Regional Business Council and The Business Council of Fairfield County. Its mission is to promote economic growth in Southwest Connecticut by linking the social and economic advantages offered by the region's three urban centers (Bridgeport, Norwalk, Stamford) and surrounding towns. In 2006, the One Coast One Future Health Care Industry Cluster Study examined the health care industry's potential as a regional economic driver. This Study identified the development of the health care workforce as a priority with significant potential to drive overall economic growth The One Coast, One Future Health Care Workforce Initiative aims to develop a strategic health care workers plan to strengthen the competitiveness of the One Coast, One Future Region.

Methodology – The Business Council of Fairfield County retained Holt, Wexler & Farnam, LLP to work with a Steering Committee composed of regional leaders primarily in health care, higher education, and workforce development. The Steering Committee met four times between May and December of 2007 to review current health care workforce development efforts and to vet potential solutions. The Steering Committee developed recommendations based on a review of the region's central health care workforce challenges, an inventory of the region's current responses to those challenges, and extensive research into additional strategic options. Research was conducted via a national literature search and interviews with a variety of local and national leaders involved in health care, education, and workforce development.

For the purposes of this study, the "One Coast region" is comprised of 15 of Fairfield County's 23 municipalities and 5 towns and cities in New Haven County. The One Coast region had an estimated 2006 population of 773,211. Key demographic trends impacting the future of the regional health care industry include an aging population and increasing foreign immigration.

The 2006 Health Care Industry Cluster Study identified growing workforce shortages as the most important issue affecting the prospects for the region's health care industry. Regional and statewide shortages across several health care occupations are threatening the capacity of health care providers to offer the level of service needed by the region's population. To address the region's workforce shortages, the Study recommended the creation of the current Health Care Workforce Initiative to address four priorities:

1. Build the capacity of the regional higher education system to graduate more qualified nursing and allied health professionals.
2. Increase worker access to health occupations and increase mobility within the health care field.
3. Improve services to bring more English-proficient, immigrant workers into the health care field.
4. Address "Brain Drain" with steps to make the region more attractive as a location for nurses and other health workers.

II.   Recommendations

The project Steering Committee divided its recommended strategies into three categories: 1) those that could be accomplished by regional leadership and are priorities for immediate action; 2) those that represent longer-term regional solutions, and 3) those that require a high degree of state-level coordination.

Priorities for Immediate Implementation

1. **Create an ongoing partnership to coordinate the region's health care workforce development efforts** – As indicated by the variety of recommendations listed below, a comprehensive approach to

addressing regional (and state) health care occupational shortages will require action in several areas. The Steering Committee has found support for an ongoing partnership of the One Coast region's health care industry, education, and workforce development leadership to align the region's supply of and demand for health workers and address specific opportunities for action. The working title for this partnership is the **Southwestern Connecticut Health Workforce Compact.** Modeled on partnership efforts in several regions of the country, the partnership would: a) coordinate efforts among key stakeholders (employers, the workforce development system, and education institutions) to identify and prioritize employer needs and specific opportunities to meet them efficiently through joint actions and advocacy; b) spearhead projects intended to produce tangible outcomes; c) develop capacity, including pursuing funding opportunities to fill gaps in services; d) coordinate attraction, training, placement, and retention of quality health workers through marketing and awareness strategies, including an interactive website; and e) develop, gather, and share regional health workforce data.

The next step will be to convene regional leaders to review this opportunity in detail and, if they decide to proceed, undertake the detailed planning and recruitment of other partners to launch the partnership.

2. **Implement a regional pilot of a web-based centralized clinical placement system** – Web-based centralized clinical placement (CCP) systems use online scheduling systems to match students from participating schools with clinical placement opportunities at participating clinical sites. The goals of CCP systems are to: a) increase the overall number of available clinical sites; b) decrease the faculty and staff clinical hours needed to arrange clinical site time; c) decrease the cost to schools and clinical facilities of placing students; d) provide an early alert system when clinical sites become available; and e) provide a forum to increase communication about issues facing education and workforce development. CCP systems in other states have increased clinical capacity by as much as 38% while reducing clinical placement turnaround time from 16 days to two days and reducing the staff time needed to coordinate clinical placements. A regional pilot would require an annual investment of approximately $68,000 for the "StudentMax" CCP software system currently used by 11 states, a (half-time) Program Coordinator, and meeting costs. Some regions that use CCP systems charge user fees (to schools and health care facilities) that generate sufficient income to sustain the system. Other regions receive public and/or philanthropic funds that support the system.

Implementation will require three critical actions: (1) convening a critical mass of education programs and clinical facilities willing to join in the project and work out the by-laws governing the operation of the system; (2) securing seed funding for start-up and at least three years of pilot implementation, and (3) identifying a neutral and efficient operating entity to broker the process.

Longer-Term Regional Solutions

1. **Implement a regional pilot of a scholarship for service program to produce nursing and/or allied health teaching faculty** – Scholarship for service programs provide scholarships to students in exchange for a commitment to work in the region following program completion. Most hospitals in the region already offer tuition assistance to staff nurses who pursue a master's degree. These separate programs could be strengthened to the benefit of the regional health care industry by providing matching scholarship funds to nursing master's students who agree to serve as nursing teaching faculty following graduation. This would produce the faculty needed to train more nursing and allied health students.

The first step towards a regional pilot program will be to convene the region's hospital and educational leadership to document the need for nursing teaching faculty, set concrete funding needs and desired

outcomes for a regional pilot program, agree upon program details (eligibility requirements, award amounts, service obligation), and identify potential funding sources.

2. **Develop a central resource for immigrants with foreign health care experience to help them gain employment in the regional health care industry** – Immigrants who hold health care experience in their home countries could help to fill gaps in the regional health care workforce, but many immigrants need "bridge" programs to help them connect to the training needed to gain employment in the health care industry or even become accredited in their profession. Work of the Central AHEC Foreign-born Health Professional Project suggests that a central resource for immigrants with foreign health care licenses to gain assistance navigating local credentialing and employment opportunities would increase utilization of this portion of the immigrant population to fill shortages. This initiative could be piloted within the existing allied health partnership between the CT Works One-Stop system and the Community Colleges.

3. **Expand employer-sponsored, on-site, basic skills programs (including English as a Second Language)** – Having employers offer basic skills classes to their own employees addresses several of the barriers (transportation, work and family obligations, the cost of training, difficulty locating courses) that low-wage workers and recent immigrants face in terms of accessing training. Employer-sponsored ESL courses have the added benefit of enabling employers to develop curricula that focus on the specific language needs of workers in the health care industry. Major health care employers can expand employee access to these courses through the proven delivery model of Adult Education at Work, an initiative of the Connecticut Adult Education system engaging the workforce development system and regional Adult Education and ESL providers. State and federal funds can be made available to defray some of the costs.

<u>Statewide Solutions</u>

1. **Expand the availability of nursing and/or allied health distance learning courses** – Distance learning would expand the region's capacity to produce nursing and allied health graduates without significant investments in physical infrastructure. Several challenges, including faculty and clinical shortages and the time and funds needed to create online programs, must be addressed before distance learning can substantially increase the capacity of the higher education system.

2. **Create an online student-transfer information system for nursing and allied health coursework** – An online student-transfer information system would provide an electronic platform for academic planning, supplying articulation information to students and advisors. Such a system would greatly benefit nursing and allied health students in the One Coast region, but (due to economies of scale and the statewide nature of the higher education system) makes the most sense as a statewide system covering all academic areas and all public, two- and four-year colleges throughout the state.

3. **Support increased salaries for community college nursing faculty** – Two factors explain nursing faculty shortages: 1) teaching faculty are required to have a Master's degree; 2) wages for teaching faculty are not competitive with the wages Master's level professionals can earn providing direct care. Furthermore, community college faculty members in high-cost areas (like Southwest Connecticut) earn the same as comparable faculty in lower-cost areas due to statewide collective bargaining agreements. We encourage the Community College System and its faculty unions in their current effort to increase salaries for nursing faculty by allowing more competitive salaries in shortage occupations and negotiating greater flexibility to adjust compensation based on differences in regional living costs.

4. **Develop a broad scholarship for service program** – Several states offer scholarships to students in health care occupational shortage programs in exchange for commitments to work in the state for a set time period following program completion. The Connecticut legislature should institute a broad scholarship for service program for health care shortage occupations. Such a program would require a significant investment of state dollars, but it could be expected to encourage higher program enrollment and retention of graduates.

Background & Findings

I.   Introduction

a.   The One Coast, One Future Health Care Workforce Initiative

The Health Care Industry Cluster Project was conceived in 2006 as part of the larger One Coast, One Future effort, led by the Business Council of Fairfield County and the Bridgeport Regional Business Council with support from Congressman Christopher Shays, that aims to create stronger economic linkages among the region's business centers.

This project represents Phase II of the One Coast, One Future Health Care Industry Cluster Project. Phase I of the project, the One Coast, One Future Health Care Industry Cluster Study, took place in 2006. This Study examined the health care industry's potential as a regional economic driver, and identified the development of the health care workforce as a priority with significant potential to drive overall economic growth.

The activities of the Health Care Workforce Initiative should be integrated with related efforts occurring in the region, including a nascent U.S. Department of Labor "Workforce Innovation in Regional Economic Development" (WIRED) grant project that will focus on the health care industry, among others.

b.   Methodology

The Business Council of Fairfield County retained Holt, Wexler & Farnam, LLP to work with a Steering Committee composed of regional leaders in health care, higher education, business, and economic development. The Steering Committee met four times between May and December of 2007, and developed recommendations based on a review of the region's central health care workforce challenges, an inventory of the region's current responses to those challenges, and extensive research into additional strategic options. Research was conducted via a national literature search and interviews with a variety of local and national leaders involved in health care and education.

II.   The One Coast Region

For the purposes of this study, the One Coast region is comprised of 20 municipalities covering 462.3 square miles, including 15 of Fairfield County's 23 towns and cities and 5 municipalities in New Haven County (Map 1). Due to this project's emphasis on workforce development, the region has been defined to be coterminous with the Southwest Connecticut Workforce Investment

Map 1

One Coast, One Future Region
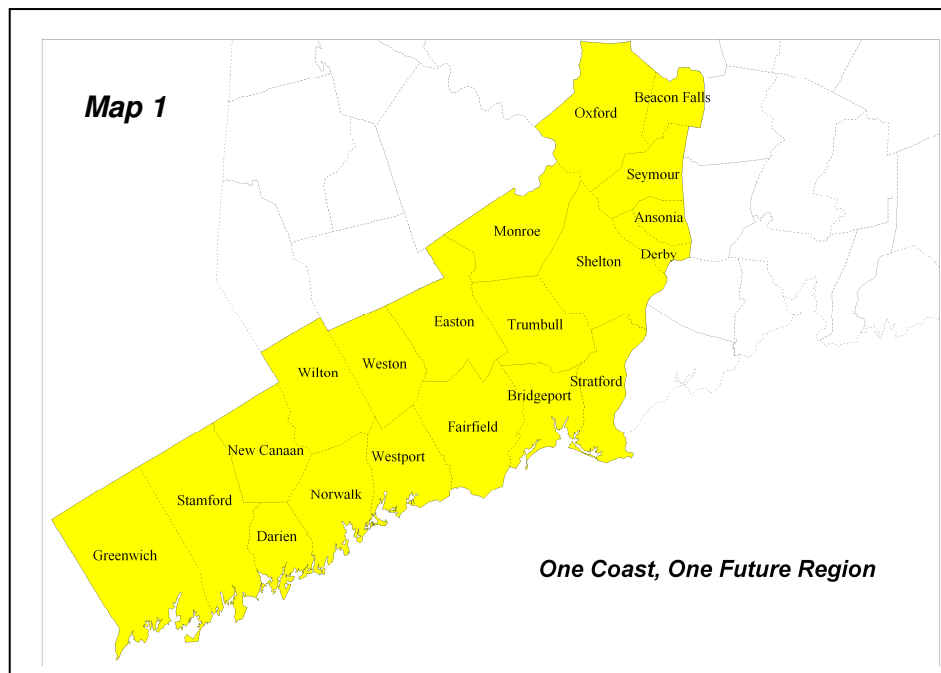
Area, the service area of The WorkPlace, Inc. The following description of the One Coast region represents a summary of the more detailed description outlined in the One Coast Health Care Industry Cluster Study, which can be found online at http://www.businessfairfield.com/webpdf/OneCoastHealthStudy.pdf.

The One Coast region had an estimated 2005 population of 775,412. From 2000 to 2005, the population of the One Coast region grew by 1.9%, slowest among the five Connecticut workforce investment areas.[1] If not for the over 35,000 foreign immigrants who came to Fairfield County during the first half of the decade, the County population would have <u>dropped</u> by over 15,000 people.[2] The region's flat population growth has primarily been attributed to an aging population and a shortage of affordable housing.

According to the 2005 American Community Survey, Connecticut is the eighth oldest state in the United States, with a median age of 39.3, almost three years higher than the national median. From 2005 to 2010, the Fairfield County population over 45 is expected to grow by over ten percent, while the population under 45 is projected to decline.[3] The continued aging of the One Coast region's population will affect the ability of health care providers to find the workforce needed to expand and replace retiring workers.

Two underlying issues represent significant barriers to drawing new health care businesses to the region and attracting and retaining the health care workers needed to stimulate the economy:

- **Transportation** – Southwest Connecticut's overburdened transportation infrastructure is a serious and growing concern for the region's economy and workforce. In the 2005 Fairfield County Business Survey, 43% of Fairfield County executives polled identified transportation as the most daunting challenge facing Fairfield County businesses in the next five years.[4]

- **Housing/Cost of Living** – High and rapidly increasing housing costs and a high cost of living in the Southwest pose significant workforce challenges for regional health care industry employers. When asked by the Connecticut Business and Industry Association (CBIA) to name the primary reason for difficulty in finding qualified workers, 32% of executives identified high cost of living and another 24% named high housing costs.[5] It is difficult for low-wage workers (e.g., nursing aides) and moderate-wage workers (e.g., registered nurses) to live in the communities where they work. High housing and living costs are beginning to negatively affect hospitals' ability to hire and retain even high-wage workers such as physicians.

Figure 1: Southwest WIA Job Growth 2002-2005

Despite these regional challenges and the many changes facing the global health care industry, the industry continues to be an engine for economic growth and employment as the population grows and ages. From 2002 to 2005, health care (ambulatory health care services, hospitals, and nursing and residential care facilities) employment in the 20-town One Coast region increased by 1.2%. This modest growth becomes more impressive when it is noted that non-health care jobs in the region actually <u>decreased</u> by 1.2% during that time. (See Figure 1 above)[6]

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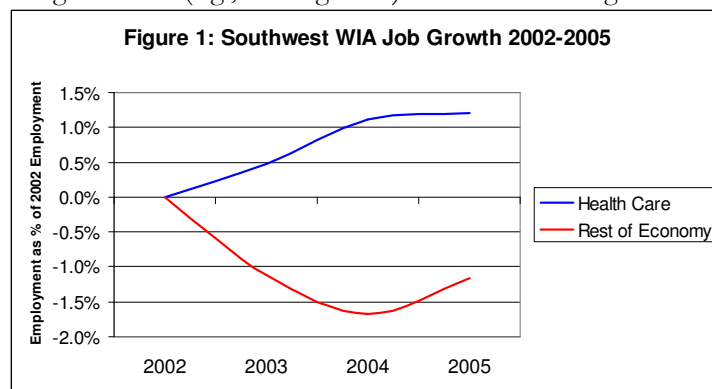
[1] Connecticut Department of Labor, "Information for Workforce Investment Planning 2006."
[2] Population Division, U.S. Census Bureau.
[3] Solucient data, 2006.
[4] 2005 Fairfield County Business Survey, Connecticut Business & Industry Association, page 4.
[5] 2005 Fairfield County Business Survey, Connecticut Business & Industry Association, page 16.
[6] Connecticut Department of Labor, Labor Market Information.

Regional occupational projections from the Connecticut Department of Labor indicate that job growth in the One Coast region's health care industry is expected to continue to outpace job growth in the rest of the economy: From 2002 to 2012, health care practitioners and technical occupations are projected to grow by 13.9% and health care support occupations by 16.1%, far exceeding the 8.5% projected job growth for the rest of the regional economy.[7] (Table 1 below)

Table 1: Projected One Coast Region Employment by Occupation, 2002-2012					
			Change in Employment		
Occupational Title	**2002**	**2012**	**Net**	**%**	**Annual Openings**
Health care Practitioners and Technical Occupations	18,380	20,930	2,550	13.9%	596
Health care Support Occupations	9,910	11,500	1,590	16.1%	320
Rest of the Economy	350,850	380,780	29,930	8.5%	11,791

Source: "Connecticut Employment Forecast: 2002-2012," Connecticut Department of Labor

III. The Health Care Workforce

a. Findings

The One Coast, One Future Health Care Industry Cluster Study identified growing workforce shortages as the most important issue affecting the prospects of Southwest Connecticut's health care industry. The key findings of this Study, along with additional conclusions drawn from the current Health Care Workforce Initiative, are summarized in the following paragraphs.

Regional and statewide shortages across several health care occupations threaten the capacity of health care providers to offer the increasing level of service needed by the region's aging population. Registered nursing has rightfully received the most attention across the state, but shortages are also growing in numerous other health care occupations. In addition to the

Table 2: CT Health Care Vacancies by Occupation, 2004	
Occupation	**# of Vacancies**
Registered Nurse	1,677
Nurse aides, orderlies, & attendants	476
Medical assistants	402
Dental hygienist	387
Licensed practical nurse	305

Source: CT DOL Vacancy Survey, 2004

shortage occupations shown in Table 2, health care employers mention radiologic technologists, CT and MRI technicians, pharmacists and pharmacy technicians, physical therapists and physical therapist assistants, medical assistants, and occupational therapists as occupations with shortages of qualified candidates. Some regional hospitals are even beginning to warn that a severe physician shortage may be on the horizon. Hospitals report that these shortages result in financial strain due to the need to offer special incentives and higher salaries. In some cases, hospitals have been forced to reduce services when they have been unable to staff all beds.

Several factors contribute to workforce shortages:

- **Faculty shortages –** Thousands of qualified candidates have been turned away from Connecticut nursing programs in the last three years due to lack of capacity to train them. Two major issues explain faculty shortages: 1) Teaching faculty are required to have a Master's degree, which few Registered

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[7] "Connecticut Employment Forecast: 2002-2012," Connecticut Department of Labor.

Nurses have; and 2) Wages for teaching faculty are not competitive with the wages Master's level professionals can earn providing direct care, particularly in high cost areas like Southwest Connecticut. The Connecticut Allied Health Workforce Policy Board (AHWPB) commissioned the *Nursing and Allied Health Faculty Staffing Plan Study Report*, which was completed by Belón Research & Practice in January 2007. This Report confirmed that "qualified faculty that possess the requisite degrees are in short supply across the allied health spectrum" and found that "the number of at-risk programs is significant." The Report also offers myriad recommendations for building the nursing and allied health faculty pipeline.

- **Lack of clinical placements –** A lack of sites available for students to complete their clinical requirements and underutilization of existing clinical sites also limits the training capacity of the One Coast's higher education infrastructure. The Connecticut Hospital Association (CHA) completed its *Clinical Placement Capacity Assessment Project Report* in July 2007. This report concluded that "the 'clinical placement problem' in Connecticut stems from the exhaustion of opportunities in some clinical specialties and misdistribution to a small extent." The report also states that "coordination and logistical issues exacerbate an already strained process." The CHA report demonstrates an acute lack of clinical placement capacity in Southwest Connecticut, as One Coast registered nursing schools need 4,935 clinical placements annually while One Coast hospitals can offer only 2,471 clinical placement opportunities – a 50% shortfall. A current method of addressing this shortage is having students travel to placements outside the region.

- **Classroom and Laboratory Space –** If nursing programs were able to attract additional faculty for expansion, they would soon run into a serious space constraint in existing facilities.

- **Lengthy academic program approval process –** The process for a college to obtain state approval for a new program area does not allow colleges to quickly respond to the changing hiring needs of health industry employers. The process for getting a new program off the ground typically takes two to three years.

- **Inadequate student preparation –** Many students emerging from the region's K-12 public school systems lack the science, math, and English skills needed to succeed in college and university nursing and allied health programs. Low student academic readiness often results in low retention rates and a smaller pool of candidates to complete the credentialing process and enter the health care workforce. This also means that a significant proportion of scarce public educational resources are expended on students who do not complete their course of study while others who might complete are denied access due to lack of program capacity, suggesting a need for better counseling and screening for entry.

- **The achievement gap –** The persistence of a dramatic achievement gap between predominantly white suburban students and poorer, predominantly minority urban students restricts the One Coast region's ability to produce a qualified, diverse health care workforce. Across the region, black and Hispanic eighth graders and those receiving free or reduced price meals are less than half as likely as white eight graders to achieve goal in reading.

- **"Brain Drain" –** Exacerbating training capacity and student preparation problems is the difficulty health care employers face in hiring health care program graduates. A lack of affordable housing and a high cost of living make it difficult to attract and retain health care workers.

- **An aging workforce –** Underscoring the importance of keeping qualified, young workers in the One Coast region is the fact that older health care workers are beginning to retire in large numbers. Concerns exist that, as occupational shortages continue to grow, hospitals and other providers will be forced to ask their employees to work longer hours, leading older workers to retire earlier due to burnout.

- **Lack of infrastructure to train immigrants –** Many immigrants arrive in the region with limited education, but the number of college-educated immigrants in Connecticut increased by almost 70% from 1990 to 2000.[8] Immigrants of all skill levels can help to fill gaps in the regional health care workforce, but many require customized training and case management-style support.

- **Underrepresented demographic groups –** More men, blacks, and Hispanics will eventually need to be drawn into the health care workforce if the One Coast region hopes to avoid long-term shortages, particularly in nursing. Attracting more bilingual nurses will be particularly important as the region's Spanish-speaking population continues to grow.

b. Recommendations

The Health Care Workforce Initiative was created to address the One Coast region's workforce challenges. This Initiative focused on addressing four priorities:

1. Build the capacity of the regional higher education system to graduate more qualified nursing and allied health professionals.
2. Increase worker access to health occupations and increase mobility within the health care field.
3. Improve services to bring more English-proficient, immigrant workers into the health care field.
4. Address "Brain Drain" with steps to make the region more attractive as a location for nurses and other health workers.

The Business Council of Fairfield County convened a Steering Committee to address these priorities. The Steering Committee met four times between May and December of 2007 to review current efforts to address these areas and to vet potential solutions.

The recommendations emerging from this process are made in the context of a number of ongoing statewide efforts to address health workforce challenges. These include:

- The Governor's **Allied Health Workforce Policy Board** convened through the Office of Workforce Competitiveness, which brings together the workforce and education systems to work on eliminating barriers to increased production of graduates.

- The **Connecticut Community College system office** which has received major U.S. Department of Labor grants in 2005 and 2006 to build their capacity to produce more nursing and allied health graduates. The five colleges offering nursing degrees have come together to develop a common, updated nursing curriculum facilitating improved student access and transfers across schools. The system office is leading efforts to address the faculty shortage as well.

- The statewide working committee of the **Deans and Director's** of all the state's Nursing Programs.

- The **Connecticut Hospital Association**, which convenes hospital human resources leaders, conducts vacancy surveys, and recently completed a study of the clinical placement situation.

Solutions have been divided into three categories: 1) those that could be accomplished by regional leadership and are priorities for immediate action; 2) those that represent longer-term regional solutions, and 3) those that require a high degree of state-level coordination.

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[8] "Immigrant Populations and Health Care Access in Connecticut," Urban Institute, November 2005.

Priorities for Immediate Implementation

1. **Create an ongoing partnership to coordinate the region's health care workforce development efforts.**

As indicated by the variety of recommendations listed below, a comprehensive approach to addressing regional (and state) health care occupational shortages will require action in several areas. The Steering Committee has found substantial support for the formation of an ongoing partnership of the One Coast region's health care industry, education, and workforce development leadership to align the region's supply of and demand for health workers and address specific opportunities for action. A working title for this partnership is the **Southwestern Connecticut Health Workforce Compact.** This collaboration would serve as the hub for coordinating and advancing strategies to strengthen the pipeline of qualified workers in the health care sector. An intermediary, the primary roles of this partnership would be to:

1. Coordinate efforts among and between key stakeholders (employers, the workforce development system, and education institutions) to identify and prioritize employer needs and specific opportunities to meet them efficiently through joint actions and advocacy

2. Spearhead projects intended to produce tangible outcomes (e.g. helping hospitals achieve Magnet status;[9] coordinating incumbent worker career coaching, creating a centralized clinical placement system).

3. Develop capacity, including pursuing funding opportunities to fill gaps in services such as on-the-job training.

4. Coordinate attraction, training, placement, and retention of quality health workers through marketing and awareness strategies, including an interactive website.

5. Develop, gather, and share regional health workforce data.

Table 3 below summarizes key elements of health workforce intermediaries around the nation that offer potential models for Southwest Connecticut. Appendices A, B, and C provide case studies on three of the programs, including key lessons learned and best practices for the One Coast region to consider.

Each of these programs offers examples of workforce strategies specific to its model for One Coast to consider during implementation. The single most important element to creating a successful collaboration is the active engagement of stakeholder leadership (hospitals, schools, supporting organizations). One Coast will need the support of hospital CEOs, college Deans, leadership at the WorkPlace, Inc., and other similar decision makers who are able to commit resources and personnel to this effort. Any regional partnership would also need to work closely with and not duplicate the many related health care workforce efforts occurring at a state level.

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[9] Magnet status is an award given by the American Nurses' Credentialing Center (ANCC), an affiliate of the American Nurses Association, to hospitals that satisfy a set of criteria designed to measure the strength and quality of their nursing. A Magnet hospital is stated to be one where nursing delivers excellent patient outcomes, where nurses have a high level of job satisfaction, and where there is a low staff nurse turnover rate and appropriate grievance resolution. Stamford Hospital is the only one in the region to have achieved this status.

Table 3: Health care Workforce Intermediary Collaboration Models

Intermediary	Mission	Key Projects	Funding	Leadership
Pittsburgh Health Careers Future	Align region's supply & demand for health workers	• Educate hospitals on how to achieve Magnet Certification • Created Health Careers Web Portal for students • Developing incumbent worker training programs	• USDOL and Workforce Development Grants • Foundations • Fee revenue	Jewish Health care Foundation, other funders, Workforce Investment Board
Baltimore Baltimore Alliance for Careers in Health Care	Create linkages to health care careers for unemployed adults/advance underemployed incumbent workers into health care careers	• Career Coaching: help clients access health careers • Career Mapping Project: mapped health care career paths • Pre-Allied Health Bridge Program: basic-skills training program for unemployed adults in health care careers	• National foundations • Area hospitals • WIB • State and federal grants	Led by Workforce Investment Bd, Empowerment Zone, and Annie E. Casey Foundation. Supported by hospitals, gov't, nonprofits, training providers
Austin Health Industry Steering Committee	Address the workforce needs of the health care industry	• Increase nursing student slots at area schools • Increase hospital capacity • One-stop clinical placement system	• City, county gov'ts & WIB • Hospitals/other members • Schools	Led by hospitals, gov't, WIB, existing intermediaries, educational institutions.

Initial conversations with regional leaders in health care, workforce development and education who would need to be engaged to make such a partnership work have demonstrated significant interest, but also caution about creating a new ongoing structure. Several of the elements of this partnership exist in the current partnerships between Norwalk Community College and several hospitals and in the work of the WorkPlace, Inc. in the health sector. A partnership of this type focused on results could help jump start implementation of the Workforce Innovation in Regional Economic Development (WIRED) initiative through the WorkPlace, Inc., which targets the health sector, among others.[10] Hospital leaders stress the importance of the partnership embracing ambitious, measurable goals (e.g. doubling the number of nursing graduates in five years) in motivating their participation.

The Steering Committee expressed support for the creation of a regional partnership. The case for a tangible return on investment will need to be made as this discussion proceeds with the identification of the specific projects such an intermediary would undertake. Experience from other regions (see Appendices A-C) has demonstrated the potential power of this intermediary model. Their experiences have also identified the competitive relationships among regional hospitals as a significant challenge that can be overcome through the realization that working collaboratively to build the region's workforce development capacity ultimately benefits everyone, but also acceptance that some types of projects may not be suitable for a collaborative effort.

The next step towards developing a regional partnership will be for to convene a leadership group to review this opportunity in greater detail and, if they decide to proceed, undertake the detailed planning and

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[10] We are advised that any WIRED investments will need to involve the New York portions of the WIRED bi-state region.

recruitment of other partners to launch the partnership. As the sponsor of the Health Care Workforce Initiative, the Business Council of Fairfield County may be the best choice to initiate exploratory conversations before a permanent home for the partnership is identified. The WorkPlace, Inc., as Southwest Connecticut's workforce investment board, is an appropriate home for this effort, and is weighing the merits of a more formal partnership structure.

2. Implement a regional pilot of a web-based centralized clinical placement system

The Steering Committee has identified the shortage of clinical placements as a major impediment to expanding the number of nursing and allied health graduates, as documented in the recent CHA study. A promising solution to this constraint appears to be the implementation of a web-based centralized clinical placement (CCP) system. CCP systems being used in several states utilize an online scheduling system to match students from participating schools with clinical placement opportunities at participating clinical sites. CCP systems typically focus on nursing, but other allied health programs can be included if desired by the partners. The goals of CCP systems are to:

1. increase the overall number of available clinical sites;
2. decrease the faculty and staff clinical hours needed to arrange clinical site time;
3. decrease the cost to schools and clinical facilities of placing students;
4. provide an early alert system when clinical sites become available; and
5. provide a forum to increase communication about issues facing education and workforce development.

CCP systems in other states have increased clinical capacity by as much as 38% while reducing clinical placement turnaround time from 16 days to two days and significantly reducing the staff time needed to coordinate clinical placements. Educators on the Health Care Workforce Initiative Steering Committee report that significant faculty time is devoted to arranging clinical placements each semester.

A regional pilot would require an annual investment of approximately $68,000 for the "StudentMax" CCP software system[11] currently used by 11 states, a (half-time) Program Coordinator, and meeting costs. The program is hosted at the StudentMax server, minimizing local IT investment and reducing initial set-up time to a matter of days. Some regions that use CCP systems charge user fees (to schools and health care facilities) that generate sufficient income to sustain the system. Other regions receive public and/or philanthropic funds that support the system.

Some discussions about the possibility of creating a statewide CCP system in Connecticut have met resistance from both hospitals and nursing schools concerned about jeopardizing long-standing clinical placement relationships between clinical facilities and nursing schools. Most states currently using CCP systems have addressed this concern by writing project by-laws that protect pre-existing relationships to the satisfaction of all participants.

The Steering Committee believes that the potential cost savings, efficiency gains, and clinical placement capacity increases easily justify the costs associated with establishing a CCP system and make it ideal for a regional pilot program. Several states that implemented CCP systems regionally have successfully expanded their service areas to include larger areas. Connecticut is small enough that eventual statewide expansion appears to be a reasonable goal. Initial conversations with several hospital CEOs and administrators

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[11] www.studentmax.com

responsible for coordinating clinical placements have revealed strong support for a regional pilot of the StudentMax system. Because One Coast region clinical facilities can offer only half of the clinical placements needed by One Coast nursing schools, and because South Central Connecticut has excess clinical placement capacity, the pilot program region should be expanded to include the South Central region. Preliminary conversations with deans at South Central nursing schools indicate interest in participating in this effort.

Implementation will require three critical actions:

1. Convening a critical mass of education programs and clinical facilities willing to join in the project and work out the by-laws governing the operation of the system (models exist from other regions and states that have faced the same challenges). The Business Council of Fairfield County can serve as the convener until seed money and a permanent operating entity are identified. One of the issues that will need to be discussed by the project partners is streamlining clinical affiliation contracts to make it easier for nursing schools and clinical facilities to work with multiple clinical partners.

2. Securing the relatively modest amount of seed funding for start-up and at least three years of pilot implementation. It is estimated that a three-year pilot will cost $204,000.

3. Securing an operating entity that will be trusted as an efficient and fair broker of the process. Norwalk Community College has expressed interest in hosting the CCP system, and regional hospital and nursing school leadership has indicated openness to this possibility. If it is ultimately determined that a "neutral" host needs to be engaged, the WorkPlace, Inc. should be considered. If this program expands beyond the pilot area, statewide organizations, such as the State Department of Higher Education or Connecticut Hospital Association, may be more appropriate operating entities.

Based on responses to date, quick action could result in an operational CCP system to facilitate clinical placements in the fall 2008 semester.

Longer-Term Regional Solutions

The following strategies represent promising ideas that the regional health care workforce partnership (recommendation #1 above) should consider as potential collaborative projects.

1. Create a regional pilot of a scholarship for service program to produce nursing and/or allied health teaching faculty

Several states offer scholarships to students in health care occupational shortage programs in exchange for commitments to work in the state for a set time period following program completion. The Connecticut legislature should consider instituting a broad scholarship for service program for health care shortage occupations. In the absence of state money for this purpose, however, a regional scholarship for service program focused on producing masters-level teaching faculty for shortage programs should be instituted. This would require a limited investment and would have a multiplier effect by producing the faculty needed to train more nursing and allied health graduates.

The Connecticut *Nursing and Allied Health Faculty Staffing Plan Study Report* recommends a competitive scholarship for service model aimed at producing teaching faculty. This report recommends targeting unique programs, programs producing insufficient graduates, and programs that struggle to find qualified faculty, including Nursing, Cardiovascular Technician, Cardiovascular Perfusionist, Dental Laboratory Technician, Nuclear Medicine Technologist, Respiratory Care Therapist, and Surgical Technologist programs.

Research did not uncover any regions that are implementing scholarship for service programs focused on producing and retaining teaching faculty, but Table 4 summarizes three state-sponsored programs. Ideally, the State of Connecticut will eventually sponsor a scholarship for service program that includes nursing and allied health teaching faculty. In fact, the State Allied Health Workforce Policy Board has discussed several possible statewide tuition assistance programs to help produce more teaching faculty, and favors the scholarship for service model over other options such as loan forgiveness. Until a statewide program is adopted, however, a regional pilot program can be implemented with limited funding.

Table 4: Sample of State Scholarship for Service Programs Focused on Nursing Faculty

State	Funding Source(s)	Eligibility Requirements	Award Amount	In-State Service Obligation
New York	NY State legislature	-State resident -NY RN -Accepted to grad program	Cost of attendance up to $20,000 annually	Practice as nursing faculty for 4 years
Maryland	0.1% increase of regulated patient revenue for all hospitals	-State resident -Sponsored by MD higher ed institution	Scholarship – tuition and fees up to $13,000/yr Living Expenses (need based) - $25,000 per year	2 years as full-time faculty for each year of award
Georgia (cancelable loans)	Georgia DOL & Robert Woodruff Foundation	-State resident -GA RN -Admitted to grad program	Up to $10,000	1 year for every $2,500 received through program

Most hospitals in the One Coast region already offer scholarships to staff nurses who pursue master's degrees. These individual programs could be strengthened to the benefit of the regional health care industry by providing matching scholarship funds from a separate funding source to nursing master's students who agree to serve as nursing teaching faculty in Southwest Connecticut following graduation. Although hospitals will lose these nurses as hospital staff members, we expect that their contributions to strengthening the region's nursing talent pool as teaching faculty will easily offset this sacrifice. Flexible models in which graduating nurses teach part-time and continue working part-time should also be explored when this program is developed.

The first steps for the regional health care workforce development partnership towards a regional scholarship for service pilot program will be to document the need for nursing/allied health teaching faculty, take inventory of existing scholarship programs, set concrete funding needs and desired outcomes for a regional pilot program, agree upon program details (eligibility requirements, award amounts, service obligation), and identify potential funding sources. The two nursing masters programs in the One Coast region (at Fairfield University and Sacred Heart University) are both two-year programs with annual tuition of approximately $10,000. In order to produce ten nursing teaching faculty per year, therefore, approximately $200,000 in hospital money and matching funds would be needed to provide full scholarships to all participating students.

2. **Develop a central resource for immigrants with foreign health care experience to help them gain employment in the regional health care industry**

While intense the issues facing unskilled immigrant workers have received intense focus in the press, the needs of highly-skilled immigrants have been overlooked. The growing number of Connecticut immigrants holding work experience in the health care industry or professional health care credentials in their home

countries has the potential to fill gaps in the regional health care workforce.[12] **In addition to English proficiency training, many of these individuals could benefit from "bridge" programs to help them connect to the training needed to gain employment in the health care industry or even gain accreditation in their profession.**

A central resource for immigrants with foreign health care licenses to gain assistance navigating local credentialing and employment opportunities would increase utilization of the highly-trained segment of the immigrant population to alleviate health care industry occupational shortages. In 2006, the Central AHEC Foreign-Born Health Professionals Program held focus groups with foreign born health professionals to define their needs.[13] Participants cited language, lack of guidance/knowledge and time constraints as the barriers to pursuing Connecticut licensing in their health profession. Although career was not the primary reason most participants migrated to the U.S., they desired to continue in their profession upon arrival. They expressed (1) frustration related to the limited information available, (2) that they felt overwhelmed with the numerous requests and paper work needed in order to start the application process to validate part of their education, and (3)confusion about what to do, where to go and who to ask. As a result, the professionals interviewed became discouraged and opted for working in factories and other jobs, which were completely unrelated to their professional training, in order to meet their family obligations. This represents a loss of skilled labor force potentially available to the allied health field.

An initiative to offer counseling and support for foreign born health professionals that also links to and informs existing ESL and employer-sponsored education and training efforts could help employers tap this skilled but underutilized health workforce. The effort could start as a pilot, specialized service within existing allied health partnership between the CT Works One-Stop system and the Community Colleges with limited investment and marketing through the press and existing networks of immigrants.

3. **Expand employer-sponsored, on-site, basic skills programs (including English as a Second Language)**

Having employers offer basic skills programs (including ESL classes) to their own employees addresses several of the barriers facing low-wage workers and recent immigrants in terms of accessing training. Holding classes on site eliminates transportation problems; classes can be scheduled to avoid conflicts with work schedules; employers can offer classes to their employees for free, and workers avoid the challenge of locating and enrolling in outside classes. Employer-sponsored ESL courses have the added benefit of using curricula that focus on the specific language needs of workers in the health care industry.

The Adult Education at Work Initiative of the State's Adult Education system has demonstrated that industry-specific ESL classes can be particularly effective at attracting and retaining workers when combined with job training (http://www.adulteducationatwork.org/index.html). Large individual employers (e.g. hospitals and long-term care facilities) that employ many workers with language needs or groups of smaller employers could use industry-specific ESL courses to more effectively tap the skills and work ethic of immigrants. Immigrants would benefit from this approach by having easier access to language courses and the career advancement possibilities that come with improved language skills.

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[12] According to the November 2005 Urban Institute report "Immigrant Populations and Health Care Access in Connecticut," the number of college-educated immigrant men in Connecticut increased by 53 percent from 1990 to 2000 and the number of college-educated immigrant women increased by 88 percent.

[13] Communication with Brenda Delgado, Central AHEC, Project Director, December 31, 2007.

Some area hospitals are already developing employer-sponsored basic skills and ESL programs (ESL will be a component of Bridgeport Hospital's "Careers for Life Academy," and St. Vincent's Medical Center sponsors ESL courses for its staff members). More major health care employers should partner with Adult Education and ESL providers to design on-site, industry-specific basic skills and ESL courses. Opportunities exist to promote this approach to additional employers seeking to upgrade the basic skills of its workforce and to connect employers with the technical assistance necessary to develop successful courses. Funding is or can be made available through the Connecticut Department of Labor and the Workforce Investment System to support these types of partnerships. An infrastructure and process have been established statewide through the Adult Education at Work program to facilitate implementation and regional adult education providers could be tapped to provide services efficiently. Facilitating expansion of this work regionally would be an appropriate role for the proposed regional health workforce intermediary.

Statewide Solutions

1. Expand the availability of nursing and/or allied health distance learning courses

Creating new distance learning capabilities would expand the One Coast region's capacity to produce nursing and allied health graduates without significant investments in physical infrastructure (i.e. classroom space). Interactive, online courses are currently being developed in many states to increase training capacity and ease occupational shortages. Distance learning provides a flexible option for working adult learners balancing multiple roles to achieve their career advancement goals.

Charter Oak State College[14] participated on the project Steering Committee, and has investigated various distance learning options for consideration. The Community College system participated through Norwalk Community College, and through conversations with officials in the System Office involved with the colleges' efforts to standardize RN programs across the five colleges that offer them. The Community College system intends to move more of its nursing and allied health program content to online offerings, but has no specific timetable or resources with which to accomplish this.

Distance Learning – Strategies for Immediate Consideration

Most online nursing programs nationally are bachelor's programs, as associate's level programs are more difficult to adapt to an online delivery format because of their heavier reliance on clinical components. While the Community College System develops its distance learning capabilities, Charter Oak State College should assist one or more Connecticut nursing schools to transfer appropriate portions of their RN associate's programs online. Charter Oak could use its distance learning expertise to help partner schools determine which program components can be moved online and which components require classroom instruction.

Distance Learning – Strategies for Future Consideration

As online nursing programs around the country become established and begin to demonstrate results, Connecticut should explore opportunities to leverage these programs as part of a multi-pronged effort to increase the supply of nursing graduates through one or more of the following strategies:

1. Charter Oak could pursue a partnership with a college that offers an online RN program (Excelsior College out of New York is recognized in Connecticut, for example) in which Charter Oak offers online general education courses and the partner college offers online nursing courses.

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[14] Charter Oak is a distance learning college that began offering courses online in 1998. Charter Oak offers more than 150 video and online courses – more than any other public college in the state. Courses can be taken for personal development or to earn credits that can be applied toward a degree or professional certificate.

2.   Charter Oak could license online courses from other colleges to offer a Connecticut-based online RN program. It remains to be seen how expensive it would be to license courses and how much customization to Connecticut's standards would need to be done before such a program was ready for implementation.[15]

It is important to remember that, to substantially increase the capacity of the higher education system, distance learning expansion must occur in concert with strategies to address other capacity challenges such as faculty and clinical shortages.

2.   Create an online student-transfer information system for nursing and allied health coursework

The Connecticut State University and Connecticut Community College Systems are working towards a uniform course numbering system. Uniform course numbering can facilitate the creation of an online student-transfer information system that provides an electronic platform for academic planning, supplying articulation information to students and advisors.

California holds the most robust online student-transfer information system in the United States. The California Articulation System Stimulating Interinstitutional Student Transfer (ASSIST) system displays reports of how course credits earned at one California college or university can be applied when transferred to another. ASSIST represents a statewide effort that includes information about all of the public postsecondary educational institutions in California and receives $1.2 million from the state legislature to support its annual operations. (See Appendix E for a full description of ASSIST)

An online student-transfer information system would benefit nursing and allied health students in the One Coast region, but a regional pilot of such a system is not recommended because of economies of scale and the statewide nature of the higher education system. An online student-transfer information system makes sense only as a statewide initiative covering all academic areas and all public, two- and four-year colleges and universities throughout the state. Any efforts to create an online student-transfer information system should include a comprehensive effort to map career pathways in nursing and allied health, and the results of this effort should be included on the project website. Several factors should be taken into account when the creation of an online student-transfer information system is considered in Connecticut:

- Creating an online student-transfer information system will be a long and costly process. After receiving funding for a pilot program, California took 11 years to get all of its public colleges and universities using its system. The implementation process would require considerable initial collaboration among key stakeholders from all parts of the higher education system. Finally, although Connecticut could operate an online student-transfer information system for less money than a big state like California, it would likely require several hundred thousand dollars annually to support the staff needed to manage and operate the project.

- A successful online student-transfer information system depends upon an existing infrastructure that takes responsibility for coordinating articulation. In California, for example, all public colleges and universities employ dedicated Articulation Officers who support ASSIST by coordinating articulation activities at their institutions. Connecticut colleges have Transfer Officers who can play this role.

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[15] For an out-of-state nurse to gain licensure in Connecticut, s/he must file a notarized application with the State Department of Public Health (DPH), submit a transcript indicating a nursing degree, and pay a $90 fee. Applicants are eligible to receive a 120-day temporary permit to practice, and are typically granted their Connecticut license in less than two weeks.

- The need for a robust student-transfer information system may not be as great in Connecticut as it is in a state like California. California enrolls 2.5 million community college students, approximately one-third of whom are believed to be interested in transfer to a four-year college at any time. Connecticut, by contrast, enrolls only 45,000 community college students. Assuming a similar fraction of Connecticut community college students are interested in transfer, a Connecticut online student-transfer information system would have only 15,000 potential "customers" – versus over 800,000 in California.

3. Support increased salaries for community college nursing faculty

Increasing the supply of nursing teaching faculty will be critical to supporting the success of several of the other strategies recommended in this report. Two factors explain nursing faculty shortages: 1) Teaching faculty are required to have a Master's degree; and 2) Wages for teaching faculty are not competitive with the wages Master's level professionals can earn providing direct care. Furthermore, community college faculty members in high-cost areas (like Southwest Connecticut) earn the same as comparable faculty in lower-cost areas.

At this time, the Community College System Office is actively negotiating with the unions representing the faculty to address the goal of increasing compensation for nursing faculty to create the flexibility needed to meet market demand. Within the current collective bargaining agreements, the community colleges can bring in nursing faculty at the Assistant Professor level and hire them at a higher step on the salary scale. The college administration and unions agree that a more comprehensive solution is needed, however.

The System Office and the unions successfully negotiated salary increases several years ago when the colleges faced comparable challenges in attracting and retaining computer science faculty due to competition from the Information Technology industry. In that case (as in the current one), the System Office made the case for increased flexibility by presenting data on industry salaries to the unions. The System Office aims to complete the current process before the end of the next legislative session in May 2008.

It should be noted that collective bargaining agreement issues are separate from the question of securing funding for salary increases and the new positions required to expand capacity. The community colleges have secured $4.2 million in contributions from hospitals and other partners to support faculty salaries and fringe benefit costs to enable program expansion, but this is not sustainable as a long-term solution.

We encourage the Community College System and its teachers union to increase salaries for nursing faculty by negotiating greater flexibility to adjust compensation based on differences in regional living costs and/or allowing more competitive salaries in shortage occupations. The Governor and legislature will also need to increase the annual appropriation for faculty salaries to sustain and expand nursing program capacity.

4. Develop a broad scholarship for service program

A statewide scholarship for service program focused on producing health care practitioners (in addition to teaching faculty) will help alleviate the "brain drain" that plagues Southwest Connecticut health care employers. This program would provide scholarships to students in exchange for a commitment to work in the state for a specified period of time following graduation. To maximize the impact of a scholarship for service program, health care employers should pledge scholarship money to leverage state funds. Models should be considered in which: a) employers "sponsor" specific individual students with scholarships in exchange for commitments to work for them or in which b) employers contribute a lump sum to an overall pool of matching funds. In either case, employer contributions would demonstrate industry commitment to a scholarship for service program, increasingly the likelihood of a strong state-sponsored program.

Such a program will require a significant investment of state dollars, but many states have allocated state money for scholarship for service programs focused on producing and retaining workers in identified shortage areas. Table 5 provides an overview of the health-focused scholarship for service programs used in several other states. The Connecticut legislature should allot state funds to a scholarship for service program to encourage higher program enrollment and to increase retention of program graduates. A scholarship for service program will not alter the high housing and living costs that face One Coast region health industry workers, but it could encourage individuals to pursue local training and employment in health care.

Table 5: Sample of State Scholarship for Service Programs Focused on Nursing & Allied Health

State	Target Programs	Eligibility Requirements	Award Amount	In-State Service Obligation
Kansas	LPN RN (Associate's or Bachelor's)	-State resident -Admitted to eligible program -Enroll full-time -Secure eligible employer sponsorship	LPN - $2,500 per year RN - $3,500 per year (Sponsor pays $1,000-$1,750)	Work for sponsor for 1 year for each year of scholarship support
Maryland	"Program that leads to a nursing degree"	-State resident -3.0 GPA (high school or college)	Up to $3,000 per year	Full-time – 1 year for each year of assistance; Part-time – 2 years/yr
Indiana	Nursing	-State resident -Admitted to eligible program -2.0 GPA -Financial need	Up to $5,000 per year	Work full-time for 2 years
Michigan	LPN; ADN; BSN; MSN	-State resident at least 1 year -Enroll at least half-time	Up to $4,000 per year	Work as direct patient care nurse or teacher of nursing for 1 year for each year of assistance
Washington	MD; PA; NP; LPN; RN; Midwife; Pharmacist; Dentist; Dental Hygienist	-U.S. citizen -Student in eligible program -Complete all pre-requisites	Varies by program	Work full-time for a minimum of 3 years in designated shortage area

IV.   Conclusion

A health care workforce of sufficient size and quality is important to any region's economic health and quality of life. The health care industry is also a reliable source of jobs for individuals with proper training. This One Coast Health Workforce Initiative has identified a number of promising directions to make substantial progress in addressing current and looming health workforce shortages. One of the clear messages from the research and the discussions that generated this report is that the region is the appropriate level at which to address many of these challenges. While various efforts at the state level work toward needed solutions to statewide challenges, regional leadership and action can achieve practical solutions to regional challenges and demonstrate concrete gains while also formulating and presenting a unified message to state leaders on the needs for state level action. This initiative challenges regional educational, workforce development, and health care industry leadership to come together and take the actions recommended in this report to achieve measureable improvement in the nursing and allied health workforce situation in Southwestern Connecticut.

Health Careers Futures: The Southwestern Pennsylvania Healthcare Industry Partnership (IP)
(http://www.hcfutures.org)

In 2002, Health Careers Futures (HCF), a 501(c)(3) supporting organization of the Jewish Healthcare Foundation (JHF), was formed as a follow-up to a Pittsburgh Region Health Workforce Summit in 2001. As the healthcare industry's workforce development cluster coordinator for Southwestern Pennsylvania, **HCF's** mission is to align the supply and demand for healthcare workers in the regional healthcare industry by improving attraction, recruitment and retention of quality healthcare workers; and instituting research of relevant health workforce issues.

An Executive Advisory Board, drawn from the healthcare workforce and industry sectors as well as regional non-profits and training institutions, guides Health Careers Futures' (HCF) strategic direction.

Examples of Projects:

- The **Health Careers Web Portal**. (http://www.abouthealthcareers.org/) is a web site built to inform middle and high school students about health careers, improve students' perceptions of health careers and help students prepare for a health career in Southwestern Pennsylvania. The site provides health careers exploration and match, resources to pursue a health career and tangible outcomes for student users.

- The **Incumbent Worker Investment and Skills Enhancement (I-WISE)** program gives frontline support staff workers and their managers tools to improve their communication and problem-solving skills. The training program is aimed at reducing turnover, improving patient safety, and ultimately supporting organizational transformation. By providing short, on-site classes, the program trained almost 3,000 people at 15 facilities in just one year. To help meet program demand, HCF will soon offer a "train-the-facilitator" module, permitting participating organizations to train up to three facilitators from their own staffs.

- HCF created the **Health Careers Toolkit** to help job seekers enter the healthcare industry. The Toolkit provides information on career awareness, literacy, and job preparedness. Toolkit Technical Assistance Managers work with employers, workforce development organizations, government, and education institutions to coordinate training in and distribution of Toolkits. The approach fosters strong partnerships and an integration of Toolkit information into existing education and career awareness initiatives.

- Increase partner capacity by helping hospitals with the Magnet certification process; educate teachers about health careers literacy and pathways; seek new funding opportunities such as U.S. Department of Labor Incumbent Training Projects.

Key Lessons/Best Practices:

- Use participants' feedback to continually inform and revise program models. Based on evaluations, HCF shortened I-WISE classes, allowed more time for review, and offered a broader range of courses, increasing demand and satisfaction.

- Ongoing, active employer engagement is critical for success.

- Surveying employers and potential workers is crucial to determine which career fields to focus efforts on developing from both a supply and demand perspective.

Appendix B: Baltimore Alliance for Careers in Health care (BACH)
(http://www.marylandhealth careers.org/)

Health care is the largest sector employer in the Baltimore region. In 2005, **Baltimore Alliance for Careers in Health care** (BACH) was incorporated as a 501(c)(3) workforce intermediary to address the impending health care worker shortage. BACH's mission focuses on 1) creating linkages to health care careers for unemployed adults and 2) advancing underemployed incumbent workers into health care careers. Alliance membership represents regional hospitals, state and federal government agencies, higher educational institutions, area non-profits, and national and local foundations. The Advisory Board is drawn from this membership. The Board tracks progress and guides BACH's strategic direction.

Examples of Projects:

- **Career Coaching**: The center-post of BACH's efforts is in career coaching. Housed in member hospitals, seven career coaches have engaged with over 400 clients in just two years. Clients are current underemployed incumbent workers of the member hospital. Coaches help clients access career paths within the hospital, negotiate with departments for time off for training, and help clients identify barriers to career advancement (literacy, transportation, childcare, etc.) Coaches are not case managers and do not address these barriers. BACH sponsors up to half of a coach's salary for the first two years (reduced to 25% after that). Member hospitals are responsible for the remaining salary amount.

- **Career Mapping Project**: BACH focuses its efforts on the specific jobs the industry is showing signs of shortages. They receive this data from the Maryland Hospital Association. They have mapped health care career paths in patient care, technical, and administrative job tracks. Career maps are linked with training opportunities to show wage gains from educational attainment. With an investment of $80,000, career mapping has been customized for five member hospitals. A generic map has also been developed.

- **Pre-Allied Health Bridge Program**: BACH has partnered with area training providers to create a basic-skills training program for unemployed adults that have an interest in health care careers. Designed to improve the pipeline of entry-level health-care workers, the goal is to then link these workers with the Career Coaching program.

Key Lessons/Best Practices:

- Career Coaching is the key ingredient for success in the BACH model. Top-quality coaches encourage buy-in from member hospitals, help BACH focus on job retention, and improve the pipeline of incumbent workers to avoid potential worker shortages. Provide peer-networking opportunities for the coaches on a regular basis.

- Employer (hospital) engagement is critical for sustainability and success. Engagement must be at the highest level of leadership (decision-makers) to commit resources. Start with a couple of leading hospitals and have them help to make inroads with the others (peer-network). Recognize that competition will inhibit full cooperation among participating hospitals.

- Use Efforts to Outcomes [or similar client tracking software] to track progress from the beginning.

- Partner with competent training providers with proven track records. Some staff resources will have to be devoted to ensuring proper program implementation and progress by trainers.

Appendix C: Central Texas Health Industry Steering Committee (HISC)

(http://www.worksourceaustin.com/aboutus/hisc.htm)

Health care providers in Central Texas have had difficulties filling vacant positions, particularly for nurses. As a result of their staffing constraints, employers are also unable to meet the demand for increased services. The region is unique in already having several existing local workforce intermediaries and training providers trying to address these issues. In 1999 the Health Industry Steering Committee (HISC) was formed with USDOL and local WIB monies to advance local strategies.

The HISC is now housed in the Greater Austin WIB for increased efficiency and collaboration. HISC is a membership-based organization that is self-sustaining through a dues structure. Members include regional governments, both area hospital systems (totaling an $80,000 contribution), local school systems, training providers, higher education organizations, the WIB, among others. HISC attributes much of its success to the collaborative culture of the Austin region, and to creating self-sustaining structures/projects that show direct outcomes for its partners.

Examples of Projects:

- **Increase in slots of nursing students**: One of the top priorities and early successes for HISC has been the increase of available slots at regional schools for nursing students. HISC convened key stakeholders, facilitated solution-based strategy sessions, and helped identify sustainable funding streams. By adding qualified faculty and increasing the frequency of courses offered, HISC facilitated direct subsidy of nursing course offerings by local hospital systems. This has resulted in an increase from 120 available slots to over 350 available slots annually. The waitlist for admittance to the nursing program after completing prerequisites has also been eliminated.

- **Clinical Placement System:** HISC created a single point of contact system that facilitates matches between openings at hospitals and students needing placements. Since 2006 HISC has placed over 1200 students into more than 5100 different clinical experiences as part of their student-nursing requirements. Funding for this part-time position comes directly from the nursing schools that use the service, while HISC covers the overhead costs.

- **Increasing Hospital Capacity:** HISC provides targeted grant-writing services to raise funds for on-the-job and other training opportunities, help hospitals achieve magnet status and state certifications, coordinate communication with key stakeholders, and convene strategy meetings for the hospital systems to be able to address their workforce issues.

Key Lessons/Best Practices:

- Engage high levels of public and private support for workforce development services.

- Pursue a cluster-based approach to workforce services.

- Increase the level of grass-roots action and public concern over skills gaps and income disparities among its residents.

- Recognize that hospital (employer) buy-in is an ongoing sales job – start with a joint funding opportunity to show that collaboration can lead to new funding streams. Be able to show outcomes.

** While a national foundation effort resulted in the creation of the Central Texas Workforce Intermediary Initiative in 2005, it was disbanded due to duplication of existing efforts.

**Appendix D: Centralized Clinical Placements System –
Oregon Regional Nursing Clinical Placement Workgroup[16]**

The Oregon Nursing Clinical Placement Workgroup (RNCPW) was started in 2003 "to improve the efficacy and capacity of nursing education through innovative, collaborative, centralized coordination of regional student clinical placements."[17]

The region for the RNCPW is the Willamette Valley, an area 25-40 miles wide and 120 miles long. It is the most populated area in Oregon and includes fourteen (14) schools of nursing and sixteen (16) hospitals. The system was started with grant funding and was built by and hosted at Pop Art, a commercial vendor. The RNCPW, while hosted at Pop Art, is presented as a part of and is linked to the Oregon Center for Nursing web site. The system is comprised of an Access database and a series of web-based forms that participants use to enter and submit their data. The school sends an electronic request to the hospital. The hospital, in turn, sends a confirmatory email to the person managing the Oregon CCP database and copies the school on the email as well. This serves as the school's confirmation that their new placement/correction/changed request has been approved.

The RNCPW is a non-profit organization. The annual operating budget for the program is approximately $56,000. There is a part-time coordinator and administrator, and various other consulting, office, and legal expenses. The RNCPW sustains the system through an annual schedule of user fees: Schools of nursing: $14 per student FTE headcount; Health care facilities: $14 per average daily census.

The database/system, as developed by the Oregon RNCPW, may be purchased for $5,000, plus an annual licensing fee. Massachusetts and Tennessee are among the states that have purchased the database/system and currently use it to coordinate centralized clinical placements.

All participants enter their own data electronically. In the spring, schools of nursing send their clinical placement needs into the system. Health facilities determine their available clinical placement opportunities and send these into the system. In May, with conflicts identified, a negotiating meeting/luncheon is held. In June, hospitals receive the requests from the schools and then send out approval notices.

From Oregon's perspective, the advantages of a centralized clinical placement system are:

- Everyone has access (read and print) to database information for all clinical placements for all schools and hospitals.
- New opportunities can be quickly utilized.
- There is a significant reduction in percent FTE necessary to negotiate and secure clinical placements for both schools of nursing and hospitals.
- Faculty and student clinical requirements can be standardized to avoid repetition and increase efficiency.
- Membership meetings provide a forum for discussion of issues facing nursing education and workforce development.

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[16] Adapted from "Centralized Clinical Placements for Nursing Students: A Review of Existing Models and Considerations for Massachusetts," Prepared for the Massachusetts Board of Higher Education by Tobin Communications in association with Farley Associates, Inc., June 2005.

[17] Regional Nursing Clinical Placement Workshop Project Overview.

Appendix E: Online Student-Transfer Information System – California "ASSIST" System

ASSIST is an online student-transfer information system that displays reports of how course credits earned at one California college or university can be applied when transferred to another. ASSIST is the official repository of articulation for California's colleges and universities and therefore provides the most accurate and up-to-date information available about student transfer in California. ASSIST stands for Articulation System Stimulating Interinstitutional Student Transfer.

The mission of ASSIST is to facilitate the transfer of California Community College students to California's public four-year universities by providing an electronic system for academic planning which delivers accurate, timely, and complete information and operates as the official repository of articulation information for the state of California.

In the early 1980's, the University of California began to explore using computers to store, maintain, and display transfer-related data. In 1985, with approximately $300,000 in funding from the California State Legislature, ASSIST was created as a pilot program involving 30 colleges and universities. By 1996, ASSIST had grown to include information about all of the public postsecondary educational institutions in California. ASSIST operates under the guidance and counsel of the three California postsecondary educational segments: the University of California, the California State Universities, and the California Community Colleges. Its goal is to use the computer to provide students and counselors with an easy way to access accurate and complete information about transferring from one California college or university to another.

ASSIST is funded by the California state legislature and has a $1.2 million annual operating budget. The ASSIST Board of Directors, made up of representatives from each of the public postsecondary educational segments, oversees development and establishes policy for ASSIST. The daily implementation and project operations are managed by the ASSIST Coordination Site. The Board of Directors and the ASSIST Coordination Site work together with participating campuses to ensure that ASSIST continues to meet the needs of students transferring among California's institutions of higher education. ASSIST is supported by Articulation Officers at each California college and university. Articulation Officers serve as "point people" for articulation issues for their institution.

The ASSIST Coordination Site (ACS) is the central office for ASSIST. The ACS is responsible for coordinating all ASSIST-related activities and services, such as software development, technical support, database coordination, training, and administrative coordination to support the implementation of ASSIST at colleges and universities. ACS employs 11 staff people including a Director, an Administrative Assistant, two Customer Support Representatives, a Web Designer, a Data Analyst, a Technology Director, two Programmers, and a Systems Administrator.

In 2006-2007, ASSIST served 1.1 million distinct users who viewed 9.7 million articulation reports. The primary users are students and career/guidance counselors throughout the California higher education system. There are approximately 2.5 million community college students and 600,000 university students in California. Connecticut, by comparison, enrolls approximately 45,000 community college students and 123,000 university students.

Appendix F: List of Persons Interviewed

- ❖ **Nancy Bafundo**, *Chairperson,* Connecticut Board of Examiners for Nursing
- ❖ **Elizabeth Beaudin**, *Director of Nursing and Workforce Initiatives*, Connecticut Hospital Association
- ❖ **Stephen Carragher**, *Health Program Supervisor, Office of Practitioner Licensing,* Connecticut Department of Public Health
- ❖ **Frank A. Corvino**, *President & CEO*, Greenwich Hospital
- ❖ **Susan Davis,** *President & CEO,* St. Vincent's Medical Center
- ❖ **Brenda Delgado**, *Executive Director,* Connecticut Area Health Education Center
- ❖ **Pat Fennessey**, *Consultant to Health Programs*, Connecticut Technical High School System
- ❖ **David Levinson**, *President*, Norwalk Community College
- ❖ **Carol Mitchell**, *Program Coordinator,* Oregon Center for Nursing Regional Nursing Clinical Placement Workgroup
- ❖ **Alice Pritchard**, *Co-Chair*, Allied Health Workforce Policy Board
- ❖ **Jo Shute,** *Director of Marketing, Communications & Planning,* The WorkPlace, Inc
- ❖ **Maureen Sroczynski**, *President & CEO,* Farley Associates, Inc.
- ❖ **Paul Susen**, *Chief Academic Officer,* Connecticut Community College System.
- ❖ **Eric Taggart**, *Director,* ASSIST Coordination Site
- ❖ **Janice Thompson,** *Vice Chair,* Connecticut League for Nursing Council of Deans and Directors
- ❖ **Marie Tobin**, *President,* Massachusetts Center for Nursing
- ❖ **Bob Trefry**, *President & CEO,* Bridgeport Hospital
- ❖ **Maureen Wagner,** Connecticut State Department of Education, Bureau of Career & Adult Education