Analyzing Trends in Connecticut’s Allied Health Workforce

A Report by the Allied Health Workforce Policy Board

June 2014
Background

In 2004, Connecticut’s legislature established the Connecticut Allied Health Workforce Policy Board (AHWPB) (Public Act 04-220) to conduct research and planning activities related to the allied health workforce. According to the legislation, the responsibilities of this board include:

1. Monitoring data and trends in the allied health workforce including but not limited to:
   a. The state’s current and future supply and demand for allied health professionals; and,
   b. The current and future capacity of the state system of higher education to educate and train students pursuing allied health professions.
2. Developing recommendations for the formation of an economic cluster for allied health professions.
3. Identifying recruitment and retention strategies for institutions of higher education with allied health programs.
4. Developing recommendations for promoting diversity in the allied health workforce including but not limited to racial, ethnic and gender diversity and for enhancing the attractiveness of allied health professions.
5. Developing recommendations regarding financial and other assistance to students enrolled in or considering enrolling in allied health programs offered at public or independent institutions of higher education.
6. Identifying recruitment and retention strategies for allied health employers.
7. Developing recommendations about recruiting and utilizing retired nursing faculty members to teach or train students to become licensed practical nurses or registered nurses.
8. Examining nursing programs at institutions of higher education and developing recommendations about the possibility of streamlining the curricula offered in such programs to facilitate timely program completion.

The Allied Health Workforce Policy Board is overseen and supported by the Office of Workforce Competitiveness on behalf of the CT Employment and Training Commission.

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# Table of Contents

Introduction ...................................................................................................................................... 4  
Reforms Impacting the Healthcare Workforce .............................................................................. 4  
CT's Healthcare Workforce: Trends and Analysis .......................................................................... 6  
Factors Affecting the Demand for Healthcare Workers ................................................................. 7  
Matching Supply and Demand: Training the Healthcare Workforce Pipeline .............................. 11  
Primary Care ........................................................................................................................................................................ 12  
Behavioral Health ................................................................................................................................................................. 15  
Long-term Services and Supports .............................................................................................................. 17  
Health Information Technology/Management ...................................................................................... 19  
Building a Skilled Workforce: Challenges Facing Individuals and Institutions ......................... 21  
Recommendations .......................................................................................................................... 23  
Conclusion ...................................................................................................................................... 25  
References ...................................................................................................................................... 26
Introduction

In 2004, Connecticut’s legislature established the Connecticut Allied Health Workforce Policy Board (AHWPB) (Public Act 04-220) to conduct research and planning activities related to the allied health workforce. The Board began meeting in March 2005 and issued its first report to the legislature in February 2006, followed by annual reports each year after. For the past nine years, the AHWPB has convened employers and educators in the healthcare fields to share their data on the workforce, knowledge about what shortages exist, and to make recommendations to the legislature on how to prepare the current and future workforce for industry demands.

The AHWPB has been monitoring reforms driven at the state and federal level which will profoundly change the way in which healthcare will be delivered in Connecticut in the future. The implementation of the Affordable Care Act (ACA) combined with the growing healthcare needs of America’s aging population and the utilization of new technologies is impacting the delivery of healthcare services. This report highlights federal and state healthcare reforms as well as the supply and demand for healthcare workers and the challenges associated with preparing that workforce for the next generation of healthcare delivery. The report concludes with a set of recommendations to focus Connecticut’s efforts on key workforce challenges.

Reforms Impacting the Healthcare Workforce

Critics argue that the American healthcare system has not been effective in delivering quality care to all citizens or in managing the country’s healthcare dollars. The healthcare costs for the nation are ever-increasing and the system is the most expensive in the world, yet measures of medical quality indicate that Americans are not living longer, or healthier, or receiving the best care for the dollars spent. And one reason why is that the current fragmented, volume-based, system is not accountable to payers or consumers and is unsustainable.

The various delivery-system reform provisions of the Patient Protection and Affordable Care Act (H.R.3590) and the Health Care Education and Reconciliation Act (H.R.4872) – together known as the Affordable Care Act (ACA) - strive to achieve the “Three Part Aim”: improving the experience of care for individuals, improving the health of populations, and lowering per capita costs. In order to achieve those goals, the existing payment models and healthcare delivery system need to be reformed. The ACA recognizes the need for system reforms and accountability and includes $9.5 billion to expand services nationally over a five year period.

The ACA aims to move the healthcare system away from its current episodic, fee-for-service payment approach and towards a coordinated model that is focused on delivering high-quality, low-cost care across the continuum of care. In addition to changing the method through which providers are paid for healthcare, it is also necessary to reform the way in which that care is delivered, i.e., reforming the delivery system by creating high-performing organizations of physicians and hospitals that use systems of care and information technology to prevent illness, improve access to care, improve safety, and coordinate services (http://www.accountablecarefacts.org). These changes will have a direct impact on the skills demanded of current and future workers in healthcare in both nonclinical and frontline positions (Alssid & Goldberg, 2013).
In 2011, Connecticut’s Healthcare Cabinet was established to advise the Governor and Lt. Governor on issues related to implementing ACA and the development of an integrated healthcare system for the state. In March 2013, the Governor’s office received a $2.8 million planning grant from the Centers for Medicaid and Medicare Innovation (CMMI) to develop a State Healthcare Innovation Plan. The State Innovation Model (SIM) planning focuses on achieving better health, while eliminating health disparities; improving healthcare quality and experience; and lowering healthcare costs (CT Healthcare Innovation Plan, 2013).

In addition to planning for the implementation of the ACA, Connecticut is leading other reforms as well. Money Follows the Person (MFP) is a multi-million dollar federal demonstration grant, received by the Connecticut Department of Social Services in 2007. It is intended to rebalance the long term care system so that individuals have the maximum independence and freedom of choice in where they live and receive services. There are several inter-related initiatives in MFP including workforce development; hospital discharge planning; long term services; and nursing home right-sizing.

In 2011, building on the early work of MFP, Connecticut undertook a major planning effort related to long term care. Connecticut’s Strategic Rebalancing Plan (Rebalancing) is the culmination of a multi-month process which aims to increase choice in where people receive long-term services and supports, while supporting cost efficiencies in the Medicaid program. In Fiscal Year 2012, of those receiving Medicaid, 56% of people receiving long-term care received their care in a home or community-based setting and 44% received their care in an institution.

By 2025, more than 48,600 individuals in Connecticut are expected to need Medicaid long term services and supports, an increase of more than 9,800 individuals over current levels. By 2025, CT Rebalancing goals would shift that ratio to 75% receiving long-term care in a home or community based setting and only 25% receiving care in an institution. Those that can and have expressed interest will have the opportunity to be back in the community while those that have the most acute needs will remain in the institution.

The planning model is part of an initiative by Governor Malloy and the General Assembly to expand long term care options and help the nursing home industry diversify its business model to meet changing service needs. The Governor announced in March 2014, an investment in seven skilled nursing facilities of $9 million of federal and state Medicaid funding as well as state bond funds. For instance, Southington Care will receive $2,051,148 to increase capacity to deliver and promote community services by building a single point of entry for central Connecticut residents, including a 24-hour hotline and a tool kit for community services; expand choice and improve health outcomes by expanding geriatric care management and creating a person-centered education and engagement program; and raising awareness about community long-term services and supports by developing a comprehensive marketing strategy targeted to hospitals. Another round of proposals will be solicited in the summer of 2014 for up to $25 million in additional funding.

The AHWPB is monitoring these efforts and has invited presentations through the year to align efforts impacting the workforce. In partnership with state sponsored efforts such as the State Innovation Model planning, Rebalancing, and Money Follows the Person, the AHWPB can help to position Connecticut businesses and workers for these changes.

CT’s Healthcare Workforce: Trends and Analysis

Connecticut’s healthcare workforce continues to be one of the largest in the state and is projected to continue growing in the next ten years. The CT Department of Labor reports that Health Care and Social Assistance is the largest sector in Connecticut. In 2013, total employment in the state was 1,633,806, and employment for health-related occupations was 277,171 or 16.96%.\(^2\) The CT Department of Labor projects by 2020, the employment level for health-related occupations will increase to 325,928, a 21.6% increase for the ten-year period.\(^3\)

Table 1. Connecticut Total Employment 2013

Table 2 highlights occupation projections from 2010-2020 indicating both the number of projected openings over the period as well as the percentage increase in those jobs. A number of occupations have significant numbers of new workers anticipated. Others may have high percentage changes over the ten year period but a smaller numerical change. For instance, registered nurses (RN) show a high numeric change (7,146) while

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\(^2\) CT Department of Labor, CT Total and Healthcare Employment. Q2 2013.

audiologists have a high percentage change of 23% but only 22 projected new jobs over the 10 year period. The AHWPB has focused its analysis on occupations with high numeric change such as Personal Care Aides, Physical and Occupational Therapists, Physician Assistants and Respiratory Therapists. All of these workers will be critical to the full implementation of the ACA and the focus on primary care.

Table 2. CT Occupational Projections 2010-2020

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Care Aides</td>
<td>15,794</td>
<td>24,162</td>
<td>8,368</td>
<td>53</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>37,404</td>
<td>44,550</td>
<td>7,146</td>
<td>19</td>
</tr>
<tr>
<td>Home Health Aides</td>
<td>10,533</td>
<td>14,343</td>
<td>3,810</td>
<td>18.3</td>
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<tr>
<td>Nurse Aides, Orderlies, and Attendants</td>
<td>23,304</td>
<td>25,848</td>
<td>2,544</td>
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<tr>
<td>Medical Assistant</td>
<td>6,642</td>
<td>8,267</td>
<td>1,625</td>
<td>24.5</td>
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<td>Physical Therapists</td>
<td>3,748</td>
<td>4,538</td>
<td>790</td>
<td>21</td>
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<tr>
<td>Physicians and Surgeons, All Other</td>
<td>1,967</td>
<td>2,342</td>
<td>375</td>
<td>19</td>
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<tr>
<td>Occupational Therapants</td>
<td>3,221</td>
<td>3,560</td>
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<td>11</td>
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<td>Pharmacists</td>
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<td>1,867</td>
<td>339</td>
<td>22</td>
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<td>Physician Assistants</td>
<td>1,360</td>
<td>1,678</td>
<td>318</td>
<td>23</td>
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<tr>
<td>Respiratory Therapants</td>
<td>1,207</td>
<td>1,505</td>
<td>298</td>
<td>25</td>
</tr>
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<td>Internists, General</td>
<td>1,736</td>
<td>1,999</td>
<td>263</td>
<td>15</td>
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<td>Speech-Language Pathologists</td>
<td>1,081</td>
<td>1,335</td>
<td>254</td>
<td>24</td>
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<tr>
<td>Family and General Practitioners</td>
<td>996</td>
<td>1,241</td>
<td>245</td>
<td>25</td>
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<tr>
<td>Surgeons</td>
<td>599</td>
<td>755</td>
<td>156</td>
<td>26</td>
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<tr>
<td>Anesthesiologists</td>
<td>704</td>
<td>854</td>
<td>150</td>
<td>21</td>
</tr>
<tr>
<td>Therapists, all other</td>
<td>452</td>
<td>568</td>
<td>116</td>
<td>26</td>
</tr>
<tr>
<td>Obstetricians and Gynecologists</td>
<td>816</td>
<td>930</td>
<td>114</td>
<td>14</td>
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<tr>
<td>Dietitians and Nutritionists</td>
<td>418</td>
<td>524</td>
<td>106</td>
<td>25</td>
</tr>
<tr>
<td>Psychiatrists</td>
<td>658</td>
<td>761</td>
<td>103</td>
<td>16</td>
</tr>
<tr>
<td>Recreational Therapants</td>
<td>634</td>
<td>704</td>
<td>70</td>
<td>11</td>
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<tr>
<td>Optometrists</td>
<td>386</td>
<td>448</td>
<td>62</td>
<td>16</td>
</tr>
<tr>
<td>Health Diagnosing and Treating Practitioners, All Other</td>
<td>409</td>
<td>466</td>
<td>57</td>
<td>14</td>
</tr>
<tr>
<td>Chiropractors</td>
<td>339</td>
<td>385</td>
<td>46</td>
<td>14</td>
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<tr>
<td>Radiation Therapants</td>
<td>272</td>
<td>309</td>
<td>37</td>
<td>14</td>
</tr>
<tr>
<td>Audiologists</td>
<td>97</td>
<td>119</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Orthodontists</td>
<td>142</td>
<td>153</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Podiatrists</td>
<td>194</td>
<td>203</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>


Factors Affecting the Demand for Healthcare Workers

A number of factors will impact the healthcare workforce in the years ahead. For instance, the model of care delivery will shape workforce demand. To the extent that medical homes are adopted, the clinical shortage could be lessened because of the reliance on other care providers and non-clinical staff. In addition, front line workers could see their roles and tasks expand without change in compensation or job advancement and some employers may hire lower-paid and lower-skilled workers as a means to reduce staff at higher levels (Wilson, 2014).
Employers interviewed for a 2014 Jobs for the Future study could not predict their staffing needs in the coming years in large part due to the uncertainty of the impact of healthcare reform. Major hospitals in Connecticut, Ohio, Virginia and other states announced cutbacks in 2013 due to the cuts in Medicare and Medicaid funding (Wilson, 2014) and in many cases efforts are focused on training current staff to fill openings not on developing external pipelines (Wilson, 2014). However, according to the report, experts claim that tens of millions of new patients will require an upsurge in hiring new workers, particularly in primary care (Wilson, 2014). Massachusetts saw the largest additions of jobs occurring shortly after implementation of their state reforms. Growth was concentrated among technical, administrative and support staff including health information technicians and nurse’s aides (Wilson, 2014).

Another factor that will impact the future demand for healthcare workers is the current age of the workforce. As shown below in Table 3, healthcare related employment data by age indicated that 25% of employees are between the ages of 45-54 and 18% are between the ages of 55-64. In data gathered from the Connecticut Department of Public Health’s Statewide Health Care Facilities and Services Plan, it shows that 27% of Physicians and Surgeons and 22% of Registered Nurses in CT are age 60 or older. There is limited data on what percent of these licensed professionals have already left the field but information from the Masterfile estimates about 10% age 65 or older for each Physician specialty may have retired (CT Health Innovation Plan, 2013). A 2014 report by the CT League for Nursing suggests that in a recent survey of 1661 Registered Nurses, 51% are 55 and older, 13% are retired and 9% do not work in nursing (CT League for Nursing, 2013). As shown in Table 3 below, in the years ahead, as demand increases, employers will need to be ready to replace almost 20% of their workforce.

Table 3. Connecticut Health Care Employment by Age

<table>
<thead>
<tr>
<th>Age Range</th>
<th>% of Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-18</td>
<td>1%</td>
</tr>
<tr>
<td>19-21</td>
<td>3%</td>
</tr>
<tr>
<td>22-24</td>
<td>5%</td>
</tr>
<tr>
<td>25-34</td>
<td>21%</td>
</tr>
<tr>
<td>35-44</td>
<td>21%</td>
</tr>
<tr>
<td>45-54</td>
<td>25%</td>
</tr>
<tr>
<td>55-64</td>
<td>18%</td>
</tr>
<tr>
<td>65-99</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Quarterly Workforce Indicators (QWI)

Another factor that will impact the workforce and projected openings is Connecticut’s aging population which will require increased healthcare services, such as nursing and residential care. Connecticut is ranked second among states with the highest percentage of the population in both the ‘Aged 90 and Over’ and ‘Aged 65 and

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Over categories. In 2012, CT population aged 65 and older was 14.8% of the overall population. In 2015, that percent is projected to increase to 15.98% and by 2020 it will be 18.12%. Compounding this issue is that CT’s population change from April 2010-July 2013 was only 0.6%, compared to the national average of 2.4%.

Table 4. CT Age Projections 2012-2015 and 2020

![Chart showing age projections from 1980 to 2020]


Healthcare needs related to an aging population will also require a shift in delivery models. For example, growth in long-term services and supports will shift the delivery of care from residential facilities toward community based services, redistributing the workforce from skilled nursing facilities to home care agencies. This shift requires the home care workforce to have a different set of skills such as the ability to work autonomously than was needed by facility-based staff.

In addition, the type of care needed in the home will become more complex. The CT General Assembly’s Alzheimer’s Task Force report found that seventy percent (70%) of individuals with Alzheimer’s or related dementias reside in the community, and this is likely to increase the demand for home care services and supports (CT General Assembly, 2013). Of those with dementia who live in the community, 75% live with someone and the remaining 25% live alone (CT General Assembly, 2013). At least 175,000 family and friends provide an estimated $2.4 billion in unpaid care to individuals living with Alzheimer’s and other dementias (CT General Assembly, 2013). While relatives, friends and other unpaid caregivers provide significant long term services and supports, 13% of people needing any type of care use paid assistance in either a primary or secondary role (CT General Assembly, 2013). As the number of individuals with Alzheimer’s in the United States

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8 US Department of Commerce, United State Census Bureau. Retrieved 1/29/14
is expected to increase substantially over the next few decades, the long term care workforce will need to expand in size to meet demand and enhance their training to provide better services.

In addition to issues of aging, growth in chronic diseases such as heart disease, diabetes and asthma are generating increased demand for health services including ambulatory care and hospitalizations. An estimated 25.8 million people have diabetes in the United States; 163,000 people in Connecticut. Left unaddressed, diabetes can lead to disability, blindness, increased healthcare costs and increased mortality (CT Health Innovation Plan, 2013). In addition, low socioeconomic status (SES) populations in Connecticut are more likely to smoke, which increases their risk for cardiovascular and respiratory disease and cancer (CT Health Innovation Plan, 2013). According to a recently published study, 9.2% of Connecticut’s residents and 11.3% of children living in the state have asthma. In 2009, Connecticut spent over $112 million for acute care management of asthma; $80.3 million on hospitalization and $32.6 million on emergency department visit charges to address this disease (CT Health Innovation Plan, 2013). Management of chronic disease is a major focus of the Affordable Care Act and will require specialized training and coordination of care for clinical and non-clinical staff at all levels and in a variety of settings.

In order to address the spectrum of need presented by Connecticut residents, particularly the elderly and those with chronic diseases, all healthcare settings will need a prepared workforce to meet the increased demand and specialization.

Table 5. Healthcare Employment for the State 2013

As shown in Table 5, the healthcare delivery system will have many types of facilities available for patients. Federally Qualified Health Centers, created in the 1960s to serve disadvantaged populations particularly those on Medicaid, are expected to play a major role in the expanded prevention and primary care services envisioned in the ACA (Wilson, 2014). Connecticut hospitals and health systems which provide more than 55,000 jobs (CT
Hospital Association, 2014) will serve those with acute needs while long term care facilities will care for those unable to stay in their homes or communities due to their level of service needs.

**Matching Supply and Demand: Training the Healthcare Workforce Pipeline**

Much of the healthcare workforce requires education beyond high school and thus will be trained in Connecticut’s institutions of higher education. The Board of Regents for Higher Education has put forth a new strategic plan entitled Transform CSCU 2020. Transform CSCU will improve the student experience by uniting the 17 CSCU institutions as one interdependent system, strengthening online learning capacity, and better aligning coursework with the strongest industry growth sectors. These efforts can help to better match supply and demand for healthcare workers.

In addition, the BOR has been awarded a four-year Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant from the United States Department of Labor, entitled “Health and Life Sciences Initiative” (HL-SCI). The $12 million project provides targeted certifications, industry-recognized credentials, certificate and associate degree training at five Connecticut Community Colleges (Norwalk, Capital, Gateway, Manchester and Middlesex,) together with other Board of Regents member institutions (Eastern Connecticut State University and Charter Oak State College) to prepare veterans, Trade Adjustment Assistance impacted, dislocated, and under- and unemployed workers for careers in growing health and life sciences occupations. HL-SCI implementation includes three evidence-based program strategies: 1) Curriculum Innovation will create at least 15 new certificate/degree programs and align for-credit certificate programs with industry-recognized credentials, deliver math and science booster modules online and as smart phone “apps”, and deliver online/hybrid learning courses to accelerate course completion; 2) Prior Learning Assessments (PLAs) shall enable students to earn 10,000+ college credits for work skills and on-the-job learning, improving achievement rates and reducing time to completion; and 3) Recruitment and Placement Services shall provide internships for HL-SCI participants and help students find high-paying jobs (or start on pathways towards these jobs) in growing industries by providing placement services.

In 2013, Connecticut public and private colleges and universities graduated over 4500 students from healthcare related programs. As shown in Table 6, while most occupational areas have sufficient graduates to meet the ten year demands, a number of occupations need focused attention for recruitment to meet projected openings. These occupations include diagnostic medical sonographers, medical records and health information technicians, and radiologic technologists and technicians.
### Table 6. Occupational Projections and Related CT College and University Graduation

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2010</th>
<th>2020</th>
<th>Change</th>
<th>%</th>
<th>Annual Salary</th>
<th>Ed Required</th>
<th>2012-2013 CT Graduates</th>
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<tr>
<td>Psychiatrists</td>
<td>658</td>
<td>761</td>
<td>103</td>
<td>15.6</td>
<td>189,364</td>
<td>D</td>
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<td>Physical Therapists</td>
<td>3,748</td>
<td>4,538</td>
<td>790</td>
<td>21.1</td>
<td>81,538</td>
<td>D</td>
<td>158</td>
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<tr>
<td>Physician Assistants</td>
<td>1,528</td>
<td>1,867</td>
<td>339</td>
<td>22.2</td>
<td>101,778</td>
<td>M</td>
<td>104</td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td>1,967</td>
<td>2,342</td>
<td>375</td>
<td>19.1</td>
<td>81,011</td>
<td>M</td>
<td>117</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>37,404</td>
<td>44,550</td>
<td>7,146</td>
<td>19.1</td>
<td>76,838</td>
<td>M/B/A</td>
<td>1561</td>
</tr>
<tr>
<td>Radiation Therapists</td>
<td>272</td>
<td>309</td>
<td>37</td>
<td>13.6</td>
<td>78,286</td>
<td>A</td>
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<td>Respiratory Therapists</td>
<td>1,360</td>
<td>1,678</td>
<td>318</td>
<td>23.4</td>
<td>66,859</td>
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<td>Cardiovascular Technologists and Technicians</td>
<td>411</td>
<td>528</td>
<td>117</td>
<td>28.5</td>
<td>64,702</td>
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<td>Diagnostic Medical Sonographers</td>
<td>826</td>
<td>1,164</td>
<td>338</td>
<td>40.9</td>
<td>80,089</td>
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<td>Radiologic Technologists and Technicians</td>
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<td>2,985</td>
<td>576</td>
<td>23.9</td>
<td>64,803</td>
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<td>28.9</td>
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<td>Emergency Medical Technicians and Paramedics</td>
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<td>Surgical Technologists</td>
<td>1,007</td>
<td>1,140</td>
<td>133</td>
<td>13.2</td>
<td>49,294</td>
<td>PC</td>
<td>17</td>
</tr>
<tr>
<td>Licensed Practical and Licensed Vocational Nurses</td>
<td>8,806</td>
<td>9,931</td>
<td>1,125</td>
<td>12.8</td>
<td>53,700</td>
<td>PC</td>
<td>173</td>
</tr>
<tr>
<td>Medical Records and Health Information Technicians</td>
<td>1,420</td>
<td>1,641</td>
<td>221</td>
<td>15.6</td>
<td>41,321</td>
<td>PC</td>
<td>26</td>
</tr>
<tr>
<td>Health Technologists and Technicians, All Other</td>
<td>1,351</td>
<td>1,638</td>
<td>287</td>
<td>21.2</td>
<td>49,020</td>
<td>PC</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: CTDOL; Board of Regents for Higher Education and CT Office of Higher Education 2012-2013 Graduation Data (Educational level code: D=doctorate; M=master’s; B=bachelor’s; A=associates; PC=post-secondary certificate)

A number of key occupational areas need attention in order to implement the ACA and support an effective continuum of care. These areas—primary care, behavioral health, long-term services and supports, and health information technology/management, all contribute to a holistic healthcare system ready to serve individuals across the age spectrum and in community and skilled care facilities. Examples of educational programs aligned to these high need areas are offered throughout the section and available in a full listing in the Allied Health Workforce Policy Board’s Inventory of Healthcare Initiatives in Connecticut 2014.

### Primary Care

A cornerstone of the state’s SIM plan is supporting the transformation of primary care to the Advanced Medical Home (AMH). Under this model, a primary care team coordinates the entirety of a person’s care. The model includes five core components: whole-person centered care; enhanced access; population health management; team-based coordinated care; and evidence-informed clinical decision making (CT Health Innovation Plan, 2013).
In order to promote full implementation of the AMH model, the state will need to encourage professionals to collaborate across primary, acute, specialist, community and social care as well as between fields such as primary care and behavioral health providers.

With millions more insured Americans, the current national shortage of physicians presents an ongoing challenge to access in the healthcare system. The ACA has begun to fund training for more primary care physicians and increased resources for community health centers and promotes increased payment rates for primary care doctors who accept Medicaid or work in rural areas (Consumer Reports, 2013).

It is estimated that there are 2,585 primary care physicians currently practicing in Connecticut. Data suggests that demand for doctors will grow more rapidly than supply resulting in shortages of more than 20,000 physicians nationwide. Data reviewed in this report suggests this trend will hold in CT with demand for doctors in double digit percentages.

The state’s SIM report notes that the education of primary care physicians must be a priority for three reasons: the greatest unmet demand for health professionals is for primary care physicians; the draw of specialty care has pulled doctors away from primary care; and even with other primary care practitioners on the team, there is no substitute for having a critical number of primary care physicians (CT Health Innovation Plan, 2013).

In addition, to primary care physicians, the AMH will require an array of other healthcare professionals including registered nurses and physician assistants as well as support personnel such as community health workers and patient navigators to provide coordinated care. The American Hospital Association’s 2011 roundtable of clinical and health system experts recommended that all health care professionals should be educated with the context of inter-disciplinary clinical learning teams. They noted it will be critical but challenging to re-educate the current workforce to work in a team-based model of care (American Hospital Association, 2013).

Quinnipiac University has opened the Center of Medicine, Nursing and Health Sciences to support team-based professional training. Quinnipiac’s new MD degree program began in October 2012 with a charter class of 60 students and will focus on the training of primary care physicians. CT AHEC facilitates the Inter-professional Education Program (IPE) which aims to cultivate an interdisciplinary environment in which medical, nursing, pharmacy, and pre-health professional students interact and care for patients as a team. This type of training will be critical to ACA implementation as well as integration of other healthcare professionals with doctors in the provision of care.

A recent research study concluded that 47% of the tasks a physician performs could be delegated successfully assuming that non-clinicians can take on many routine chronic care services. Delegation will require a change in work culture that challenges traditional top down models of organization and specialization and encourages collaboration and information sharing (Wilson, 2014). Data suggests that the number of nurse practitioners and physicians’ assistants will grow rapidly and could mitigate the projected shortage of physicians if this workforce is effectively integrated into the primary care delivery system (US Department of Health and Human Services, 2013).
The medical assistant position is the single largest occupational category in primary care, comprising about half a million workers nationwide and 7160 in CT.9 Because no license is required, the training of medical assistants ranges from short term certificate programs to associate degrees. MAs work under the supervision of a physician, nurse practitioner or physician assistant handling clerical functions (reception, filing, appointments) and clinical roles (preparing patients for exams and taking vital signs). These positions are expanding with additional duties in practice administration including supervision, scheduling and routing of patients and other duties. The expanded role of the MA is particularly seen in clinics that have taken on the role of patient centered medical homes (Wilson, 2014). Asnuntuck Community College for instance educates individuals for the registered medical assistant balancing theory and hands-on practice needed to work in the field with imbedded instruction on electronic medical records.

The ACA is also promoting the utilization of new and emerging occupations such as the community health worker and patient navigator. However, the opportunity for training and employing workers in new occupations to improve care and lower costs is limited by the lack of reimbursement for activities such as patient navigation and care coordination (Wilson, 2014).

The community health worker (CHW) serves as a liaison between individuals in a community and their local healthcare and social services providers. CHWs are responsible for helping individuals and communities adopt healthy behaviors through outreach and conducting educational programs. Some CHWs provide information on available resources, offer social support and informal counseling, advocate for individuals and community health needs, and provide services such as first aid and blood pressure screening. There is no standard education or training required for this position. CHWs are employed by hospitals, medical practices, and community health centers in both rural and urban areas (Alssid & Goldberg, 2013).

In 2012, the Southwestern CT AHEC distributed two surveys to CHWs and their employers to better understand the characteristics of CHWs in Connecticut as well as their roles, met and unmet training needs and employment status. Though the sample size of CHWs was low (43), the data collected showed that the majority of CHWs had at least some college education and the proportion with a college degree or more was 28%. The employers who responded to the survey (32) expected their employees to have interpersonal skills, knowledge of the community, bilingual skills and knowledge of the healthcare field as a foundation in addition to communication, organizational and advocacy skills (Alvisurez, Clopper, Felix, Gibson & Harpe, 2013). AHEC is offering CHW training throughout the state supported by CT Department of Public Health. In the last three years, over 100 CHWs received training and field experience.

The patient navigator is a relatively new position gaining in importance due to the ACA’s mandate to coordinate patient services. These frontline workers act as a coordinator bringing together resources and managing paperwork associated with care. Primarily these individuals work in hospitals and clinics with patients and families to help them navigate the healthcare system. There is no clear educational path to becoming a patient navigator. Some employers are hiring individuals with clinical experience while others may be hire social workers and others may hire laypeople who are untrained but who have helped others through the healthcare

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system. This field has only recently been tracked by the Bureau of Labor statistics and more data will be available in the future (Alssid & Goldberg, 2013).

Gateway Community College began offering a patient navigation program in 2013 with their first cohort funded by the Department of Public Health. The program teaches students to proactively guide patients through local healthcare systems in order to achieve optimal health outcomes. Students participate in 24 hours of classroom training and 24 hours of observational clinical activity shadowing Patient Navigators at work.

**Behavioral Health**

Behavioral health is another area of healthcare that will see an increase in demands for service since the passage of the ACA. Effective January 1, 2014, all individual health plans and those sold to small businesses must offer a comprehensive package of benefits that includes mental health and substance abuse treatment and prescription drugs; key interventions for children, youth and adults used by behavioral health professionals (Consumer Reports, 2013). This should create greater demand for mental health services on a system already overwhelmed by the needs of children, minorities and other underserved populations.

The behavioral health field includes the diagnosis, treatment, rehabilitation and recovery of persons with mental health and/or substance use conditions. Behavioral health is a very diverse subsector with significant employment opportunities in the for-profit, nonprofit, and state government sectors. There are many employment opportunities for psychiatrists, occupational therapists, pharmacists, social workers, and psychiatric and other advanced care nurses, and this situation is likely to continue.

According to Jobs for the Future’s 2011 *Connecticut Healthcare Workforce Assessment* prepared for the AHWPB, many employers anticipate that demand will rise across the board in behavioral health because of healthcare reform and the aging of the baby boomers that tend to be more comfortable seeking out behavioral health services than were their parents. Finding direct care professionals with masters’ degrees and above as well as high-level managers with the requisite certifications and experience is anticipated to be a large challenge (Holm, Quimby & Dorrer, 2011).

*The Connecticut Career Pathways in Behavioral Health* report issued by the Connecticut Workforce Collaborative on Behavioral Health in January 2011 indicates that the demand for qualified behavioral health professionals is expected to increase steadily with many behavioral health occupations growing as fast, faster or much faster than the average employment. In particular, they note clinical counselling and school psychologists and child, family and school social workers are expected to grow about as fast as average and substance abuse and behavioral disorder counselors, social and human service assistants, psychologists and psychiatrists expect much faster than average growth (Coddington, Rosenberg & Wolf, 2011).

In behavioral health, career ladders are more difficult to create for those at lower education levels, although this is not the case for behavioral health staff with professional degrees. A person can work in direct care in occupations such as Social and Human Service Assistant with a high school diploma and community college
certificate. With an Associate’s degree, one can work as a Drug and Alcohol Counselor or Mental Health Worker. The Master’s in Social Work is the ticket to entry-level clinical positions in both the state and private systems (Holm, Quimby & Dorrer, 2011). In order to work as a Therapist, Social Worker or Psychologist, one must pursue at least a bachelor’s degree but more often a master’s degree or doctorate. For instance, a school psychologist who can work in private practice or in school settings is required to have at least a master’s degree as well as educational coursework to be eligible for the initial educator certification from the State Department of Education and additional course credits and years of experience for the professional certificate (Coddington, Rosenberg & Wolf, 2011).

In Connecticut, a number of colleges and universities are working to address the demand for behavioral health professionals. Central CT State University’s Department of Counseling and Family Therapy prepares master’s level students for careers in Marriage and Family Therapy, School Counseling, and Professional Counseling. The Professional Counseling program includes tracks in Mental Health Counseling, Rehabilitation Counseling and Addictions Recovery Counseling. The courses are designed to develop student competence in the application of theory-based counseling and therapy models and addressing the concerns of diverse client populations, while the practicum and clinical internship provide students with opportunities to apply their skills in a field-based setting under close supervision. Fairfield University provides master’s degrees in Clinical Mental Health Counseling, School Counseling and Marriage and Family Therapy working with over 60 clinical training locations across the state.

The ACA calls for the integration of behavioral health with primary care in order to improve patient services and outcomes. In order to support this integration, SAMHSA and HRSA charged the Center for Integrated Health Solutions with developing a set of competencies (CIHS, 2014). Collecting information from key informants including employers from clinics, health systems, hospitals and departments of public health as well as research centers and educational institutions nationwide, the project team compiled nine core competencies. These competencies emphasize:

- **Interpersonal communication**: the ability to establish rapport quickly and to communicate effectively with consumers of healthcare, their family members and other providers.
- **Collaboration and teamwork**: the ability to function effectively as a member of an inter-professional team that includes behavioral health and primary care providers, consumers and family members.
- **Screening and assessment**: the ability to conduct brief, evidence-based and developmentally appropriate screening and to conduct or arrange for more detailed assessments when indicated.
- **Care planning and care coordination**: the ability to create and implement care plans, ensuring access to an array of linked services, and the exchange of information among consumers, family members and providers.
- **Intervention**: the ability to provide a range of brief, focused prevention, treatment and recovery services, as well as long-term treatment and support for consumers with persistent illnesses.
- **Cultural competence and adaptation**: the ability to provide services that are relevant to the culture of the consumer and their family.
• **System oriented practice**: the ability to function effectively within the organizational and financial structures of the local system of healthcare.

• **Practice-based learning and quality improvement**: the ability to assess and continually improve the services delivered as an individual provider and as an inter-professional team.

• **Infomatics**: the ability to use information technology to support and improve integrated healthcare.

These competencies are intended to help provider organizations to shape their jobs descriptions, orientation programs, supervision and performance reviews and as a resource for educators as they shape curricula and training programs on integrated care.

**Long-term Services and Supports**

The need for long-term services and supports is rapidly growing to address Connecticut’s aging population. Rebalancing efforts are estimating the need for up to 9000 additional jobs for direct care workers over the next five years. These direct care workers can work in a variety of settings including congregate housing, assisted living facilities, residential care homes, community companion homes, community living arrangements, and hospice. They may be employed by a home health care agency, a homemaker-home health aide agency, a homemaker-companion agency or be privately hired (CT General Assembly, 2013). Federal and state Medicare and Medicaid reimbursement guidelines determine which services and workforce an individual can hire. In addition, CT waiver programs offered through the Connecticut Departments of Social Services, Developmental Services and Mental Health and Addiction Services offer additional home and community-based services.

Occupational titles, roles and responsibilities of direct care workers vary slightly based on setting and Medicare and Medicaid reimbursement guidelines. A Personal Care Assistant (PCA) provides physical assistance to help the consumer carry out the activities of daily living (ADLs) like bathing, dressing, and eating. Other duties may include housework, shopping, and paying bills. The PCA position is expected to grow 53% from 2010 to 2020. A PCA has significant flexibility in their scope of work compared to other direct care workers. This position can be done in the home, community, or at the consumer’s job. Most PCAs are employed by home health care agencies and consumer employers. Although there is currently no training or experience required for this position, the Connecticut General Assembly’s Report of the Task Force on Alzheimer’s Disease and Dementia identifies the need to explore whether PCAs need to be certified (CT General Assembly, 2013) and the MFP Workforce Subcommittee has endorsed a baseline set of core competencies and is working on identifying additional advanced competencies to create clearer career pathways in health and human/social service professions. In addition, as part of the MFP Workforce Development Strategic Plan adopted in December 2012, action steps include identifying model re-training programs to allow the existing pool of institutionally-based paid direct care workers to be trained to provide services and supports in the community.

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10 Connecticut Commission on Aging: Direct Care Workforce Development- Strategic Plan, February 2012.
Existing models through Medicare and Medicaid allow for PCA services through the CT waiver system. Many of these waiver programs have a wait list that inhibits a person from receiving immediate support. There is budget language being proposed in the 2014 Connecticut legislative session that would categorize PCA services as an entitlement through Medicaid instead of a being accessed through a waiver. This would exponentially increase demand for PCAs. Training providers are waiting for clarity about potential certification or licensure of this workforce before launching programs to ensure the courses match hiring requirements.

Another direct care worker is the Home Health Aide (HHA). HHAs may check pulse, temperature, and respiration; help with simple prescribed exercises; and assist with medication routines. Occasionally, they change non-sterile dressings, use special equipment such as a hydraulic lift, give massages and alcohol rubs, or assist with braces and artificial limbs, and any other tasks a Registered Nurse chooses to have an Aide perform. HHAs are expected to grow 36% from 2010-2020. Initial training/certification is 75 hours through a state-approved training program, led by a qualified nurse. Trainings primarily take place at a DPH registered Home Health Aide Agency. Home health aides are employed by home health care agencies, visiting nurse associations, social service agencies, residential care facilities, and temporary-help firms. Others work for home health departments of hospitals and nursing facilities, public health agencies and community volunteer agencies.

HHAs are regulated by the Department of Public Health and are required to provide direct hands-on care every fifteen minutes thus restricting their work and making them less desirable for hire than other occupations such as PCAs which can perform a greater variety of functions with less oversight. Many community colleges and other training providers in Connecticut have eliminated the HHA program from their offerings due to decreased demand for this specialized training. The AHWPB is monitoring trends with HHAs to determine whether or not employers anticipate future hiring of this workforce as the CTDOL data would suggest. We anticipate a great deal of shifting among workers in the occupational categories associated with direct care workers as reforms and changes in waivers expand who can be hired and reimbursed for services.

In addition to the growing demand for services by direct care workers, the level of care needed will increase impacting the types of training the workforce requires. For instance, Connecticut will need to increase the number of direct care healthcare professionals and ensure they are competent to serve individuals with Alzheimer’s and related dementias. However, there are few generally recognized and accepted quality standards to measure dementia care that professionals provide to Alzheimer’s patients. The Task Force on Alzheimer’s and Dementia report calls on the Department of Public Health to create a new licensure model for Homemaker and Companion Agencies to include requirements that employees receive dementia training (CT General Assembly, 2013). In addition, advocates contend that individuals providing home-based services need to be trained on person-centered care to ensure they respect individuals’ freedom and choices and recognize their role in their own care. Charter Oak State College has developed two certificate programs that offer direct care workers coursework in a range of areas including issues of aging, palliative care, dementia, chronic conditions and others to help meet this demand for increased specialization.

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Health Information Technology Management

The demand for health information technology (HIT) workers and HIT skills is driven by policies pre-dating the ACA including the Health Information Technology for Economic and Clinical Health (HITECH) Act passed in 2009. The bill authorized incentives for hospitals and other providers to adopt and “meaningfully use” electronic health records (EHRs). The ACA built on this platform by making EHRs central to the success of medical homes and coordination across providers (Wilson, 2014).

Health Information Technology Exchange of CT (HITE-CT) was established through a $7.29 million award from the Office of the National Coordinator (ONC) for Health Information Technology in March 2010 to establish health information technology exchange capability across CT’s healthcare systems. In addition, HITE-CT is working with DPH to promote the development of health information technology, increased adoption of and meaningful use of electronic health records and assure the privacy and security of electronic health information.

eHealth Connecticut received a $5.7 million grant from the Office of the National Coordinator and the U.S. Department of Health and Human Services to accelerate the adoption of EHRs. They help physician’s offices to select, implement, and use systems in ways that enhance health quality, safety and efficiency. eHealth planned to transition 80% of physicians’ office to EHRs by 2014—to date they are at 70% and have received a one year extension to meet their goals (CT Healthcare Innovation Plan, 2013).

Broadly speaking, the HIT field involves the comprehensive management of health information and its secure exchange between consumers, providers, government and quality entities, and insurers. Many argue that HIT plays a critical role in reducing paperwork, medical errors and health care costs, improving the quality of care while providing a secure means for sharing confidential information.

Health information technology is an area expected to grow over the next 3-5 years with the emphasis on electronic medical records and medical coding and billing. Medical records and health information technologists who have earned a certificate are trained to assemble patients' health information including medical history, symptoms, examination results, diagnostic tests, treatment methods, and all other healthcare provider services. Technicians organize and manage health information data by ensuring its quality, accuracy, accessibility, and security. They regularly communicate with physicians and other healthcare professionals to clarify diagnoses or to obtain additional information. Experienced medical records and health information technicians usually advance their careers by obtaining a bachelor’s or master’s degree or by seeking an advanced specialty certification. Technicians with a bachelor’s or master’s degree can advance and become a health information manager. The area of health informatics is also expected to grow. This position involves not only management and integration of data but analysis that puts that data to use for improving healthcare delivery (Wilson, 2014).

Recruitment consultants and hospital representatives interviewed in the 2014 Jobs for the Future report, express doubt that EHRs will create large new employment demands or that conversion to ICD-10, the new system of diagnostic billing codes will lead to significant hiring for medical coders (Wilson, 2014). Most employers prefer to hire credentialed medical record and health information technicians. However, while having

proficiency in information technology is an important qualification for these professions; many of these positions also require clinical knowledge. Therefore, employers are training their internal workforce, particularly nurses to become HIT professionals and well as hiring new employees with the requisite technology and clinical skills.

As noted in the SIM plan, HIT is a critical enabler of primary care transformation and can lead to improvements in healthcare quality, consumer experience and cost (CT Healthcare Innovation Plan, 2013). However, Connecticut’s healthcare workforce is woefully lacking in know-how for effectively and efficiently using HIT. Although approximately 85% of CT eligible hospitals and 45-50% of eligible Medicare providers have achieved stage 1 meaningful use, stage 2 is substantially more complicated and far fewer have achieved the goal (CT Healthcare Innovation Plan, 2013).

These types of requirements will demand training in a new set of skills from the workforce. For example, some non-HIT workers such as medical assistants who perform administrative duties such as maintaining medical records as well as clinical tasks including recording patient vital signs and histories will be front end users and require one type of training, while HIT professionals such as medical records and health information technicians who are responsible for compiling, processing and maintaining patient medical records will need more technology and clinical training to gain the necessary skills (Alssid & Goldberg, 2013). The JFF report found that employers were looking for HIT and coding candidates with a solid grounding in healthcare concepts, including medical terminology, anatomy and physiology; strong detail orientation; good analytic skills; and the ability to work across disciplines. In addition, some employers were looking for acute care experience creating barriers in some cases for newly trained candidates without work experience (Wilson, 2014).

Connecticut colleges and universities are working to address the need for health information professionals. CT’s Office of Higher Education invested in the development of HIT coursework through the state’s community colleges, public universities and Charter Oak State College. The five college pilot project (Capital, Norwalk and Northwestern Community Colleges, Eastern CT State University and Charter Oak State College) built and piloted coursework at the certificate, associate and bachelor degree levels all leading to HIT occupations. The articulated pathway is intended to match employer demand with graduates of the colleges. It will be important for the Board of Regents to ensure these programs match employer requirements and alter the curriculum as the technology and healthcare system advances.

Capital Community College, through a grant from the US Department of Health and Human Services, has offered an HIT program for two groups of individuals: IT professionals who have been downsized due to economic conditions or dislocation; and healthcare professionals such as nurses, paramedics, technicians and medical assistants who are seeking continuing education in IT for career advancement. Asnuntuck Community College now offers an ICD-10 training program for medical coding students as well as incumbent workers in the field to help them meet the coding requirements and Sacred Heart University now offers a fully online graduate program in Healthcare Informatics. Capital Workforce Partners, through at USDOL H1B grant have been working with local employers and colleges to train and place HIT and coding professionals in the workforce.
Building a Skilled Workforce: Challenges Facing Individuals and Institutions

Meeting the demands of employers and the healthcare industry broadly poses challenges for both the individuals who are pursuing or advancing their careers in healthcare as well as the educational institutions that prepare them for those positions.

Too many students entering the state’s community colleges, who are potential healthcare workers lack fundamental skills in literacy, math, science, and English, and require substantial developmental education to enter a post-secondary allied health program. About two-thirds of students entering community colleges and one-fifth of students entering state universities are placed into remedial and developmental math and/or English courses. Common methods of remedial education are not successful for the majority of students. Only 8% of community college students taking remedial courses earn a credential within three years. In addition, those who have entered the healthcare field through certificate level programs often encounter great difficulty meeting the academic requirements of college degree programs and therefore aren’t able to advance up the career ladders.

Even when they have completed healthcare training programs, employers have a great deal of concern about the skills of newly trained staff and their ability to handle the technical requirements and social roles of healthcare workers. Employers contend that certification requirements do not necessarily guarantee that an applicant has the necessary skills for the job. In other instances, employers indicate that workers were technically prepared but not ready for the healthcare setting in which they would be working (Wilson, 2014).

Students, traditional college age and older, often have limited understanding of the availability of, and range of opportunities in, health careers. While many training programs exist within the state, some of those programs and careers, such as nuclear medical technologists or laboratory technicians, go virtually unnoticed by prospective students, both youth and adults. In addition, the information can be confusing to consumers who would benefit from a coordinated campaign providing facts on career opportunities and the location of and educational requirements for allied health programs. Many of the state’s colleges and universities such as Gateway Community College and St. Vincent’s College offer summer camps to allow high school students to explore and prepare for health careers and support HOSA (Health Occupations Students of America) students inviting them to campuses for tours and presentations on health careers. These efforts are critical but would benefit greatly from a coordinated effort to ensure their reach statewide.

The existing workforce is also facing demands to enhance their skills, both technical and interpersonal to align with new quality measures. A premium is being placed on job readiness, problem solving and communication skills in addition to clinical skills to ensure holistic services for individuals. Though always important to employers, these skills now have a direct impact on customer service and payments making them essential components of their business models. And as mentioned previously, the growing use of technology on the job places new demands on all positions. “Even for positions requiring less than a college education, the amount of information that must be processed and relayed electronically is huge” (Holm, Quimby & Dorrer, 2011).
Connecticut’s incumbent worker training program operated by the CT Department of Labor offers employers an opportunity to apply for matching funds to invest in exactly this type of professional development and career advancement for their current workers.

In addition, as occupations become more advanced in healthcare, many professions are now requiring bachelors and advanced degrees pushing individuals to pursue higher education or leave the field. Registered Nurses are now pursuing bachelor’s degrees in order to find employment and advance in their careers. The 2010 Future of Nursing Report (by the Institute of Medicine) concludes: “As patient needs and care environments have become more complex, nurses need to attain requisite competencies [including] leadership, health policy, system improvement, research and evidence-based practice, and teamwork and collaboration, as well as competency in specific content areas...Nurses also are being called upon to master technological tools and information management systems.”

The report recommends increasing the proportion of nurses with bachelor’s degrees—80% by 2020, and creating more “transition-to-practice residency programs.” The recent CT League for Nursing survey found that of the 1661 registered nurse respondents, 33% hold a diploma in nursing or associates degree and will have to complete a bachelors degree in the near future to maintain their positions (CT League for Nursing, 2013). The declining use of LPNs in hospitals has largely eliminated an attainable step between nursing assistant and registered nurse and has put pressure on LPNs to advance their degrees or lose their positions (Wilson, 2014).

In order to address this demand for advanced degrees, Gateway Community College offers an LPN to RN Fast Track to support the seamless and expeditious progression of LPNs to achieve their associate’s degree in nursing (ADN). Both Western CT State University and Central CT State University offer ADN to BSN programs which are working to meet this goal for advanced trained nurses. CCSU’s program is also supported through Capital Workforce Partners H1B grant in partnership with local hospitals and nursing homes.

Physical therapy is another area that now requires a doctorate for entry into the field, pushing workers who originally were able to practice with a master’s degree to complete further education or lose their license. University of Hartford’s Doctor of Physical Therapy program will produce its 16th year of graduates in 2014. Students holding a bachelors degree may apply for graduate admission to the DPT program as well as first year undergraduates who can apply for direct entry into a combined BS/DPT track.

Educational institutions also encounter challenges as they try to meet the varying and increasing demands of academic accrediting bodies and state licensing and program approval requirements. The SIM plan recommends that Department of Public Health work with schools and healthcare providers to better align licensing requirements with new industry demands and accreditation requirements (CT Healthcare Innovation Plan, 2013). The SIM report further argues that students of different clinical disciplines have rarely been educated together and that future efforts should bring these students together particularly in subjects that pertain to 15 “Nurse of the Future Nursing Core Competencies”, Massachusetts Department of Higher Education Nursing Initiative. August 2010. http://www.mass.edu/currentinit/documents/NursingCoreCompetencies.pdf
population health and patient-centered care and to have a significant portion of their training in clinical settings outside of institutions (CT Healthcare Innovation Plan, 2013). This is the goal as mentioned earlier of inter-professional training which is underway through the efforts of CT AHEC and others.

Recommendations

The AHWPB is working hard to track the implications of state and federal reforms and to partner with employers and educators to align programs with hiring and retention requirements. It will be imperative that Connecticut closely tracks supply and demand for healthcare professionals. In partnership with efforts such as the State Innovation Model planning, Rebalancing, Money Follows the Person and the new strategic plan for public higher education, the AHWPB can help to position Connecticut businesses and workers for the next generation of healthcare delivery. The following recommendations represent important steps in ensuring Connecticut has a well trained healthcare workforce.

Collect and Strategically Utilize Healthcare Workforce Data

The State must have the capacity and infrastructure (and resources) to collect, analyze and make timely use of critical healthcare workforce-related data to support effective planning and informed decision-making concerning healthcare workforce policy, strategy and related investments. This workforce data rests in several state agencies including the Office of Higher Education, the Board of Regents and the Departments of Education, Labor and Public Health as well as others which have service needs information for specific target populations such as Department of Social Services, Department of Mental Health and Addiction Services and Department of Children and Families.

In Connecticut, a future portal for healthcare workforce information could contain, but not be limited to, the following data:

- **Department of Labor data**: Quarterly Census of Employment and Wages (QCEW) Updated Quarterly; Local Employment Dynamics (LED) Updated Quarterly; Occupational Employment Statistics (OES) Updated Annually; Occupational Employment Projections; and Unemployment Insurance Data.
- **Board of Regents and Office of Higher Education**: Data from the Integrated Post Secondary Data System (IPEDS) that provides statewide higher education data by institution on student enrollment, course completion and graduation.
- **CT Department of Public Health**: Licensure and Certification Data for their healthcare practitioner occupations including but not limited to currently practicing physicians, nurses, occupational and physical therapists, behavioral health professionals and technician/technologist positions.

Recommendations:

- Develop and ensure the funding and infrastructure necessary to sustain an internet-based healthcare workforce data portal to provide efficient and effective access to key information (employment and wage data, labor market information, licensure and certification data, educational institutional capacity
and limitations, as well as socio-economic trends, demographics, performance-related information, and research studies) to inform strategy, planning, policy development and implementation, evaluation, etc.

- Use the data collected in the portal to support the development of a strategic plan to ensure that the workforce matches employer needs and that the appropriate number and variety of programs exist to train the needed professionals. In particular this plan should document the workforce needs in the four primary areas of primary care, health information technology/management, behavioral health, and long term services and supports; outline the career pathways in each area; and identify gaps in education supply versus occupational demand.

**Support Pipeline of New and Incumbent Workers**

Connecticut’s institutions of higher education are graduating growing numbers of people from their health care programs. Many of these individuals are starting at the beginning of their career ladders and will need guidance and support in order to pursue additional professional certifications and degrees. It is imperative that the Department of Education, Office of Higher Education and Board of Regents which oversee these institutions ensure that students are well informed of their occupational opportunities and are able to move seamlessly from one institution to the next and from one step in the career ladder to steps which are both lateral and advanced.

**Recommendations:**

- Clearly articulate pathways from entry level training through to advanced degrees and certifications. Ensure that at each step of the career ladder that articulation agreements exist between institutions to ensure a seamless transition for students. The Transform CSU plan, if fully implemented, would help to achieve this articulation and ensure greater student success.
- Provide opportunities for students, particularly veterans and international students with healthcare experience, to participate in prior learning assessments in order to provide credit for past experience and accelerate their training and re-employment in healthcare professions.
- Work with Department of Public Health, employers and educators to determine whether current licensing requirements align with new industry demands and accreditation requirements and make any adjustments needed.

**Create an Infrastructure to Support the Direct Care Workforce Engaged in Community Care**

Connecticut is working to rebalance its long term services and supports from a highly institutionally-based system to a system that supports a person’s choice to remain in their own homes or community. This transition is changing expectations for the provision of services to the older adults and people with disabilities. It is expected that these positions will primarily be in home-based settings. Much more work needs to be done to develop an infrastructure to facilitate training and support for these workers to ensure they provide quality, person-centered care.
Recommendations:

- Establish guidelines for and develop a database linked to the MyPlace website that allows individuals who are interested in community care work to register for employment, training and peer support.
- Develop a wide array of post-hire training opportunities for direct care workers to enhance their skills that are both online and on-ground to accommodate different learning styles and work schedules. State agencies such as the Departments of Developmental Disabilities, Social Services, Public Health and the Board of Regents can be called upon to share their current offering and collaborate to develop new courses to meet these needs.
- Investigate promising practices from Connecticut and other states related to workforce requirements and licensure, job matching and placement supports, scope of practice/roles and wages and reimbursement.

Conclusion

The AHWPB has identified much of the work that needs to be done in Connecticut to address shortfalls in supply versus demand for allied health professionals. The AHWPB provides a vehicle for this collaboration and offers this report to inform policymakers and other stakeholders about the status of the healthcare workforce and the initiatives and resources needed to ensure a strong healthcare delivery system today and into the future. The AHWPB calls on the state to target resources to the recommendations highlighted in this report. The AHWPB will work with state agencies, colleges and universities, Workforce Investment Boards, and other partners to ensure that these investments are strategically implemented, monitored, and replicated throughout the state.
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