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Immigrant Workers in the Massachusetts Health Care Industry: A Report on Status and Future Prospects

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The Immigrant Learning Center

Giving the Gift of Language
Promoting Immigrants as Assets to America

Immigrant Workers

in the Massachusetts Health Care Industry

A Report on Status and Future Prospects

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About The Immigrant Learning Center, Inc. (ILC) And The ILC Public Education Program

The ILC is a not-for-profit adult learning center located in Malden, Massachusetts. Founded in 1992, the mission of The ILC is to provide foreign-born adults with the English proficiency necessary to lead productive lives in the United States. As a way of continuing to help ILC students become successful workers, parents and community members, the school expanded its mission to include promoting immigrants as assets to America. This expanded mission is known as the Public Education Program.

The Public Education Program has four major initiatives to support the goal of promoting immigrants as contributors to America's economic, social and cultural vibrancy.

- Business Sector Studies to examine the impact of immigrants as entrepreneurs, customers and workers.
- Professional Development for K-12 teachers on teaching immigration across the curriculum.
- Briefing books with researched statistics on immigrant issues such as immigrants and taxes, immigrants and jobs and immigrant entrepreneurship.
- The Immigrant Theater Group.

Diane Portnoy is the co-founder and director of The Immigrant Learning Center, Inc. and has been in the adult education profession for over 30 years as a certified teacher. Ms. Portnoy has received considerable recognition locally and nationally for her visionary leadership. The ILC has been cited as a model adult education program in Massachusetts.

The Public Education Program is under the direction of Marcia Drew Hohn who holds a doctorate in Human and Organizational Systems and has over 20 years of experience in adult learning and systems development. Dr. Hohn has published extensively about organizational systems in adult basic education and developing health literacy among low-literate populations.

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Preface

In 2003, The Immigrant Learning Center, Inc. (ILC) launched a public education initiative to raise the visibility of immigrants as assets to America. Spurred by certain anti-immigrant sentiments that were increasingly voiced after September 11, The ILC set forth to credibly document current economic and social contributions.

Central to this effort are ILC-sponsored research studies about immigrants as entrepreneurs, workers and consumers. To provide thoughtful and substantive evidence that immigrants are vital contributors to our nation, The ILC commissioned teams of university researchers to examine immigrants' contributions in their various roles and to present those contributions within larger economic and social frameworks. Three studies of immigrant entrepreneurs and one study of immigrant homebuyers have been published to date.

Immigrant Workers in the Massachusetts Health Care Industry is the first ILC-commissioned study about immigrants as workers. It is a groundbreaking study that provides basic and new data about immigrants' presence across the spectrum of health care providers and the vital role immigrants play in this essential industry to Massachusetts. The study also examines the breadth and scope of the health care industry across the state, its current and future workforce needs and promising models for developing the future workforce. The importance of immigrants as a pipeline for this future workforce is examined in depth.

The ILC hopes that this study will reinforce its continuing mission to raise the visibility of immigrants as critical contributors to the nation and to the Commonwealth. We hope that its data and insight will inform policy and will promote thoughtful dialogue about key roles played by immigrants.

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March 2009

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SUMMARY OF KEY FINDINGS FOR MASSACHUSETTS

- In 2005, health care (along with social assistance) was the largest employment sector in the state with almost half a million workers.
- In the same year, the health sector made $29 billion in sales through 19,158 establishments.
- Foreign-born (immigrant) health care workers are filling critical vacancies across the spectrum of health care with concentrations at both the high-skilled and low-skilled ends of the spectrum.
- In 2005, foreign-born medical scientists were more than half of all workers in this occupational category followed by Pharmacists at 40 percent, Physician Assistants at 28 percent and Physicians/Surgeons at 28 percent.
- In the same period, foreign-born Nursing Psychiatric and Home Health Aides represented 33 percent of all workers in this category. Many of these workers also compose a substantial part of the "gray market" in home health care not counted in official statistics.
- Overall, foreign-born workers showed a significant presence in 22 different health care occupations.
- The Massachusetts Division of Unemployment Assistance projects 49,000 job openings between 2000 and 2010 for "Health Diagnosing and Treating Practitioners" that include 23,480 new jobs.
- Graying baby boomers, longer living periods, technological advances and the state's Health Care Reform movement will all accelerate growth in the need for health care workers.
- The demand for Registered Nurses and Home Health Aides will increase dramatically.
- In addition to filling critical vacancies and bringing valuable education and training, foreign-born health care workers bring cultural competence and enhanced cross cultural communications necessary to serving an increasingly diverse patient population.
- Hospitals, Community Health Centers and Long-Term Care Facilities have a significant presence in the state's major regions. These regions also show a significant growth in immigrant populations. This means that immigrants are both a source of workers as well as consumers of health care in these regions.
- To ensure the workforce necessary for the growth and vibrancy of the state's vital health care economy, workforce development strategies and initiatives must link the supply of immigrants to the demands of our health care industry.

INTRODUCTION:

IMMIGRANT WORKERS IN THE MASSACHUSETTS HEALTH CARE INDUSTRY

For the purposes of this report, the terms foreign-born and immigrant are used interchangeably. Foreign-born is the term used by official data sources.

The National Picture

Foreign-born and foreign-trained workers and professionals are increasingly a vital share of the labor force in health care and its allied sub-sectors. In 2000, 1.7 million foreign-born workers (immigrants) accounted for 11.7 percent of all health care workers in the U.S. This includes non-medical personnel and maintenance workers who do not necessarily deliver health services but whose work highly influences the quality of care. The share of foreign-born workers in direct health care service provision was higher: 13 percent. Overall, foreign-born workers make up 12.4 percent of foreign-born workers in the total U.S. labor force.

During the 1990s, the employment of foreign-born workers grew by 114 percent in home health care, 72 percent in nursing care and 32 percent in hospitals. Nationally, an examination of some 22 health care occupations shows that foreign-born workers are not spread evenly. Instead, they are heavily concentrated in three occupations that employ 65 percent of all foreign-born immigrant workers: Registered Nurses (22 percent), lower-skilled Nursing Aides (27 percent) and Physicians (16 percent).

Most foreign-born workers in the sector are from Asia (39 percent) followed by Canadians and Puerto Ricans combined (27 percent), Latin America (19 percent) and Europe (15 percent). Except for doctors, about 90 percent of foreign-born health care workers are female. Geographically, foreign-born workers are underrepresented outside of metropolitan areas by more than nine to one when compared with native-born workers. In terms of human capital characteristics, foreign-born health care workers show an average of 1.6 years less education than natives but this differential quickly dissolves when examining specific occupations. In selected occupations such as Medical Technologists and Nurses, foreign-born workers show more education than natives.

Health care is an important and growing industry in the United States. In 2007, the industry accounted for more than $2 trillion or 16 percent of the United States' Gross Domestic Product (GDP). According to U.S. Bureau of Labor projections, both high- and low-skill health care jobs will grow from 11.5 million in 2002 to more than 15 million in 2012. Immigrants are seen as crucial workers to filling these jobs.

For further information on the national picture, please see Appendix A.

The Massachusetts Picture

In Massachusetts, statistics paint a more dramatic picture of the vital contributions of immigrants in health care as well as different patterns within health care occupations. Currently, health care is the most important employment sector of the Massachusetts economy with almost half a million workers. In 2005, foreign-born workers filled critical vacancies and comprised almost 15 percent of the state's health care labor force. In some occupational categories, this percentage reaches as high as 40 percent. The share of foreign-born workers in the sector promises to continue growing as foreign-born workers are the major source of overall growth in the labor force of the state (now at 18 percent of the total labor force). Moreover, the economy of some metropolitan areas in Massachusetts depends heavily on the health care sector. Intuitively, it makes good sense to inquire about the contribution and role of these workers in the sector since some of our metropolitan areas have been experiencing rapid demographic changes due to an inflow of foreign-born individuals and families. Beyond the overall importance of the health care sector as a source of employment, it is also an important source of infrastructural development that strongly impacts the physical contours and economies of entire neighborhoods.

Conventional supply-and-demand explanations of how the labor market functions provide a general sense of the dynamics that influence the employment of foreign-born workers in the sector. However, they fail to illuminate important qualitative aspects of their direct and indirect contribution to quality health care delivery. Examples are cultural competence and stewardship in all kinds of health care delivery

environments. Given the importance of foreign-born workers in filling crucial health care jobs and in improving delivery of health care to an increasingly diverse patient population, it becomes important to continually expand their positive incorporation into the health care sector and improve their workforce and labor market prospects.

Objectives of the Study

Given the vital picture of foreign-born health care workers, this study has the following objectives:

1. To document the labor market position of foreign-born workers in the sector at various levels (national, statewide, sub-regional) including patterns of occupational concentration during the last decade or so, prospects for occupational mobility, wages, geographic concentration, employment by type of establishment (hospitals, community health centers, etc.) and workforce development opportunities;

2. To document, whenever possible, the socio-economic and demographic characteristics of foreign-born workers in the sector, including country of origin and gender among others;

3. To document the qualitative contribution of foreign-born workers in the health care delivery environment, especially through cultural and linguistic competence as well as cross cultural communications;

4. To document promising institutional practices in Massachusetts (mainly collaborations and workforce development activities) aimed at improving or modifying the conditions for foreign-born workers and enhancing the labor pool for employers;

5. To document the important role that institutions (universities, research organizations, hospitals, unions and professional associations, government and the non-profit sector) play in shaping the labor market prospects of foreign-born workers in the health care sector;

6. To document critical shortages in some health care professions and occupations;

7. To outline public policy recommendations for broad dissemination.

Outline of Report

Following this introduction, the report contains four additional sections as well as four appendices.

Section II provides critical new information about the presence of foreign-born workers by occupation across the sector for Massachusetts. This section contains a profile of the importance of the health care sector in Massachusetts, especially in terms of employment. Further, the report illustrates the geographic spread of some types of health care facilities in the same areas that have growing numbers of immigrants. It also provides a detailed discussion of critical labor supply and demand side factors affecting labor market insertion for foreign-born workers.

Section III discusses the qualitative aspects of the contribution of foreign-born workers in the health care sector. The focus is on aspects of diversity as well as cultural and linguistic competence that benefit health care delivery in different kinds of environments.

Section IV documents promising practices in workforce development in Massachusetts. The focus of the section is on collaborative practices between multiple stakeholders, such as employers, educational institutions and non-profits.

Section V provides policy recommendations based on the findings of this study.

Appendix I provides an overview of foreign-born workers in the health sector at the national level: employment growth in the sector, earning, occupational concentration and demographic and human capital characteristics. This section also analyzes societal and institutional forces affecting the labor market situation of foreign-born workers in the health care

sector, such as certification, aging of the nursing labor force, critical shortages, international recruitment and union activity.

Appendix II outlines the methodological approach of this report. The approach relies on a multi-methods approach to capture structural as well as cultural elements of the positive role foreign-born workers play in the health care sector.

Appendix III provides a summary of Workforce Development Programs with Promising Practices.

Appendix IV lists key informants interviewed for Section IV of the report.

THE HEALTH CARE SECTOR IN MASSACHUSETTS

Economic Importance

Geographic Concentrations

Presence of Foreign-Born by Health Care Occupation

Demand and Supply Challenges in Health Care

The Nursing Shortage and Nursing Vacancy Rates

The Health Care Sector in Massachusetts

The national picture detailed briefly in the Introduction and discussed more extensively in Appendix I dramatically illustrates the economic importance of the health care sector and the increasingly important role that foreign-born health workers are playing. They are filling critical shortages, bringing valuable education and training as well as linguistic and cultural competence to serving an increasingly diverse patient population. Massachusetts provides an even more dramatic picture in terms of economic importance, parallel geographical concentrations of both health care facilities and the state's immigrant population and sheer numbers of foreign-born workers across the spectrum of the Massachusetts health care industry.

Economic Importance of Health Care in New England, Massachusetts and State Regions

Major metropolitan areas across the United States have large glomerations of medical facilities, hospitals, clinics, research centers and private medical firms. However, the degree of concentration and integration of these institutions as well as the types of spillover effects they generate for the local and regional economy vary considerably by metropolitan area (Bartik & Erickcek, 2007). The growth in the health care industry is especially visible in the Northeast corridor. Referred by many as the center of the nation's health care economy, the Northeast's medical corridor, stretching from Bethesda, Maryland to Boston, has created over 50,000 health care jobs since 2000 (Leohardt, 2002). In 2003, the New England region employed over 801,300 and generated over $53 billion in economic activity (DeVol & Koepp, 2003).

In 2005, health care (together with social assistance) was the largest employment sector in Massachusetts. It employed approximately 458,965 workers, which is about 15 percent of a total workforce of 3,159,049 (Commonwealth Corporation, 2007). Following the health sector were retail (11.3 percent), manufacturing (10.4 percent), education (9.5 percent) and hospitality (7.7 percent). The same year, the health sector made about $29 billion in sales through some 19,158 establishments including teaching hospitals, regional hospitals, community clinics, ambulatory services, doctors' and dentists' offices, home health care, outpatient services and laboratories. As can be appreciated in Table I, health care establishments with the largest employment base (at least 20 employees or more) are primarily hospitals followed by nursing facilities and personal care establishments. However, there are also many offices of doctors of medicine in this category.

Table 1:
Employment by Type of Establishment in Massachusetts, 2005

Business Facts: Health Care Business Summary	Total Establishments	Total Employees	Sales ($ Millions)	Establishments 20+ Employees
801 All Health Services	19,158	415,037	29,296	2,133
801 Offices of Doctors of Medicine	18,874	94,197	11,356	616
802 Offices of Dentists	4,063	20,469	1,432	63
803 Offices of Osteopathic Physicians	61	270	18	2
804 Offices of Other Health Practitioners	2,468	12,006	754	28
8041 Chiropractors' Offices and Clinics	1,121	3,921	259	3
8042 Optometrists' Offices and Clinics	793	4,225	238	23
8043 Podiatrists' Offices and Clinics	362	3,823	255	1
8049 Other Health Practitioners	192	37	2	1
805 Nursing and Personal Care Facilities	832	79,279	3,020	636
806 Hospitals (incl. psychiatric and specialty hospitals)	604	167,017	8,798	400
807 Medical and Dental Laboratories	523	7,340	538	47
808 Home Health Care Services	372	18,034	1,694	241
8093 Specialty Outpatient Facilities	218	4,753	505	47

Source: The database uses data provided by Claritas, Inc., "Claritas 2005 Data for PCensus: Business Facts Health Care Business Summary."

In Massachusetts, the health sector shows a much higher level of concentration than the rest of the nation. The state has about 24 percent more employment in the sector than the rest of the nation on average. The sector accounts for at least 10 percent of regional employment across all of the state's major regions (Northeast, Southeast and Cape, Boston, Metro South West, Central, Pioneer Valley and the Berkshires). Employment is highest in Boston with about 19.2 percent in the sector. A different geographic unit of aggregation, such as Service Delivery Areas (SDAs), shows a similar picture. The health industry is a key sector for many of the state's 16 SDAs. In the year 2000, for example, the forecasted number of employed persons in health services was the largest category of workers in 10 out of the 16 SDAs. In the remaining Service Delivery Areas, forecasted employment in health services was either the largest or the second largest.

Table 2:
Number of Health Services Employees by Service Delivery Area, 2000

Service Delivery Area	Health Services Employees
Berkshire	7,213
Hampden	26,040
Boston	80,928
South Coastal	22,346
Southern Worcester	30,398
Lower Merrimack	13,688
Southern Essex	19,303
Brockton	11,283
Bristol	15,451
New Bedford	9,229

Source: Massachusetts Division of Employment and Training (2003).

The health care industry is one of the largest employment sectors in the city of Boston. In 2003, the Milken Institute Health Pole Index, which represents the degree of local concentration of health care and a metropolitan area's importance in the context of the nation as a whole, ranked Boston in the first position ahead of all other cities of the U.S. (DeVol & Koepp (2003). The city's health care sector represents more than one out of six city jobs, employing 103,835 people in 2003. This includes employment in Boston's 22 inpatient hospitals, 25 community health centers, nursing homes and community, family and child services agencies[1]. Six of the top ten largest private employers in Boston are hospitals and medical centers (Massachusetts General Hospital, Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Children's Hospital Boston, New England Medical Center and Boston Medical Center). Overall, the health services and related industries account for 40.5 percent of the total jobs in Boston (Boston Redevelopment Authority, 2001).

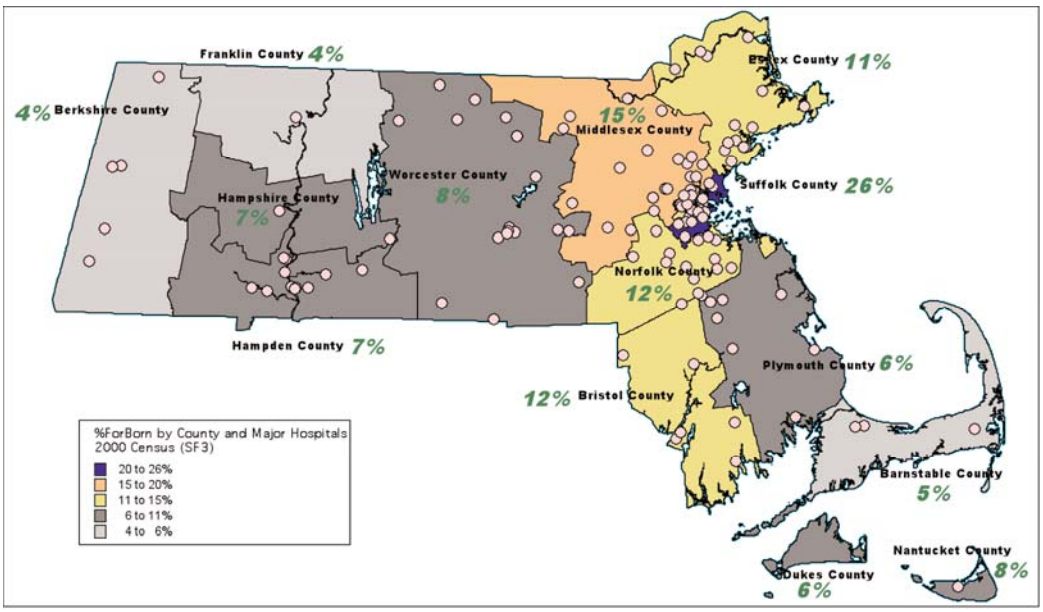
The largest collection of teaching hospitals, medical clinics, research laboratories and health care-related firms is located within the Longwood Medical and Academic Area (LMA). The LMA is a densely built environment comprising 21 institutions built on a 213-acre site adjacent to the Fenway and Mission Hill neighborhoods of Boston and the town of Brookline. On any given day more than 37,000 employees and approximately 15,000 students come into the LMA. Federal research grants awarded to LMA institutions have grown precipitously since the early 1990s. For example, between 1991 and 2001 National Institutes of Health (NIH) awards more than doubled for the LMA institutions from $302 million to $722 million. During roughly the same period, square footage growth in the LMA increased significantly[2]. Development proposed, approved or under construction for the area between 2001 and 2003 included approximately 4 million square feet of research, academic and medical space including residence halls, academic support space, patient facilities, research facilities and parking[3].

Geography of Health Care Establishments and the Foreign-Born Population

Given the geographic importance of the health care sector across the state and the growth of the foreign-born population, it seems critical to take into consideration how such growth may overlap with growth of the foreign-born population. The geographic concentration of health facilities has occurred in places where the foreign-born population increased rapidly between 1990 and 2000. This makes the sector strongly dependent on the foreign-born labor force to meet its needs and maintain its competitiveness. The geographic overlap is especially visible in areas with a strong concentration of hospitals, community health centers and long-term care facilities.

The first map shows the distribution of public hospitals in Massachusetts by counties. The foreign-born population is illustrated in percentage clusters in all of the following maps.

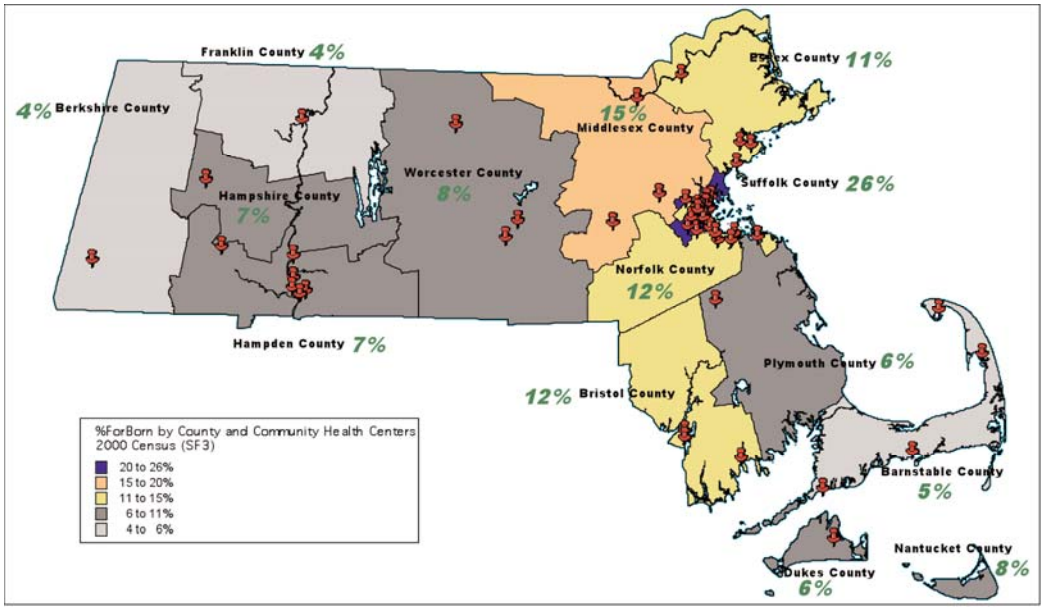
Map 1: Public Hospitals in Massachusetts by County and Growth of Foreign-Born Population (1990-2000)



Source: Based on U.S. Census STF3 (2000) and http://www.masshome.com/mec.html; http://www.theagapecenter.com/Hospitals/Massachusetts.htm; http://www.mhalink.org/public/mahospitals/

Note: These presentations show the growth rate of immigrants at the county level. The growth rates can be higher or lower in cities or towns within these counties.

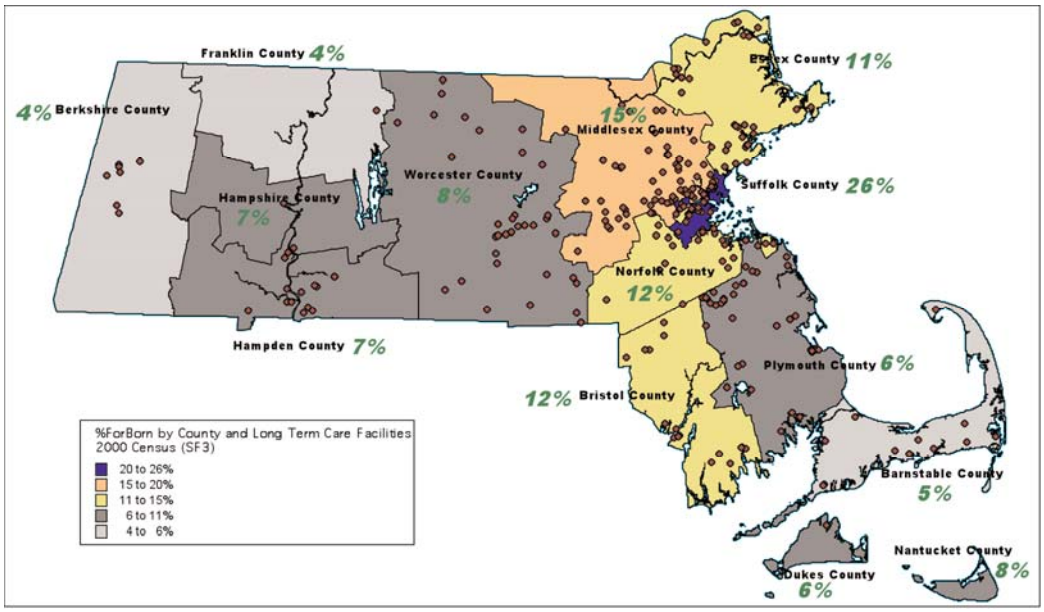
Map 2: Community Health Centers in Massachusetts by County and Growth of Foreign-Born Population (1990-2000)



Source: U.S. Census STF3 (2000) and http://www.massleague.org/HealthCenters

Note: Only federally designated (Section 330) community health centers are included.

Map 3: Long-Term Care Facilities in Massachusetts by Counties and Growth in Foreign-Born Population (1990-2000)



Source: US Census STF3 (2000) and http://www.vnacarenetwork.org/about_US/offices.shtml

In summary, this series of maps shows a striking finding. Numerous kinds of health organizations are concentrated in places also experiencing significant growth in the immigrant population. This means that immigrants are both a source of workers as well as consumers of health care and other services in these regions.

Presence of Foreign-Born by Health Care Occupation

In Massachusetts, foreign-born workers are present across the spectrum of health care occupations, and in some occupations they showed dramatic growth rates between 2000 and 2005. Not all workers are employed in the health care sector directly since some are classified in the retail sector, such as Pharmacists. However, these figures serve as a good approximation of the presence of foreign-born workers in health-related economic activity. As Table 3 below shows, foreign-born Medical Scientists were more than half of all workers in this occupational category. The percentage of foreign-born Pharmacists doubled from 20 percent in 2000 to 40 percent in 2005. Physician Assistants also showed a spectacular increase leaping from 11 percent to 28 percent. Foreign-born Physicians and Surgeons represent a substantial percentage of those employed in that category, close to one-third of workers. With all of these high-skilled occupations, it is important to note that Massachusetts may be reaping the benefits of education and training of other countries. While some of these foreign-born workers were educated and trained in the United States, many received preparation for medical professions in their native countries.

Less-skilled health care occupations that showed considerable numbers and growth include miscellaneous Health Technologists. This category groups Technologists and Technicians who are difficult to classify. It includes workers who assist patients with disabling conditions of limbs and spine or prepare braces and prostheses. Other strong and growing categories include Aides in Nursing, Psychiatry and Home Health, Dental Assistants and Dieticians and Nutritionists.

Table 3: Health Care Occupations with a Presence of 25 Percent or More of Foreign-Born Workers in Massachusetts, 2005		
	2000	2005
Medical Scientists	50%	51%
Pharmacists	21%	40%
Physicians & Surgeons	29%	28%
Physician Assistants	11%	28%
Mics. Health Technologists	29%	36%
Aides-Nursing, Psych, Home	30%	33%
Dental Assistants	18%	26%
Dieticians & Nutritionists	15%	25%

Source: U.S. Bureau of the Census: Public Use Microdata Sample (PUMS), 2000 & American Community Survey 2005.

Table 4 below shows categories where the percentage of foreign-born workers ranges from 15 percent to 24 percent of all workers. Some declines are evident among Dentists as well as Clinical Laboratory Technologists. The latter are workers who perform complex microscopic and bacteriological tests. However, there were also big increases in foreign-born Licensed Practical Nurses, Licensed Vocational Nurses, Opticians and Recreational Therapists.

Table 4: Health Care Occupations with a Presence of 15 Percent to 24 Percent of Foreign-Born Workers in Massachusetts, 2005		
	2000	2005
Dentists	23%	17%
Clinical Laboratory Technologists	22%	21%
Licensed Pract. & Voc. Nurses	10%	21%
Opticians	13%	22%
Recreational Therapists	6%	15%

Source: U.S. Bureau of the Census: Public Use Microdata Sample (PUMS), 2000 & American Community Survey 2005

Occupations showing smaller but still significant percentages of foreign-born workers include Chiropractors, Emergency Medical Technicians, Paramedics and Physical Therapists. By 2005, each category had about 14 percent foreign-born workers. It is notable that foreign-born Registered Nurses, who are in high and increasing demand, remained steady at 10 percent between 2000 and 2005. A few occupations, such as Occupational and Respiratory Therapists, experienced declines in the percentage of foreign-born workers in the five-year period.

Table 5: Occupations with a Presence of Foreign-Born Workers of 14 Percent or Less in Massachusetts, 2005		
	2000	2005
Emergency Medical Technicians & Paramedics	4%	14%
Physical Therapists	11%	14%
Chiropractors	3%	14%
Registered Nurses	10%	10%
Dental Hygienists	8%	8%
Occupational Therapists	6%	2%
Respiratory Therapists	10%	5%
Medical Records/Infor. Techs	11%	8%
Speech-Language Pathologists	6%	2%

Source: U.S. Bureau of the Census: Public Use Microdata Sample (PUMS) 2000, & American Community Survey 2005

All of these tables paint a compelling picture of the presence of foreign-born workers across the spectrum of health care occupations. These figures are made all the more significant by the fact that the overall foreign-born population in Massachusetts is 14.4 percent, yet these immigrants command higher representation in many categories. Adding to the prominent presence of foreign-born workers in health industries is the fact that this group composes a substantial part of the "gray market" in this area. These are individuals "hired directly by individuals

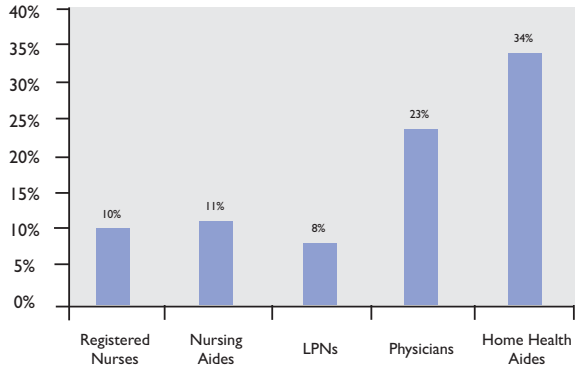
and families, who do not show up as employed in either the Bureau of Labor Statistics (BLS) or other government data systems" (HRSA, 2004, p. 8).

As the previous tables show, foreign-born workers within the health care industry in Massachusetts are not evenly distributed through the occupational structure. The majority of foreign-born workers are concentrated in either lower-skilled health care occupations such as Home Health Aides or in higher-skilled occupations such as Physicians and Pharmacists.

Demand and Supply Challenges in Health Care

On the demand side, the health care sector will need to address the growth of the aging population. Massachusetts ranked 12th out of 50 states in the percent of population 65+ years in 2000 and 10th in the percent of population 85+ years. The Health Resources and Services Administration (HRSA, 2004) reports that the population 65 and over is projected to grow 27 percent between 2000 and 2020. These demographic projections indicate a need for an expanded workforce in the health care sector. In addition to the graying of baby boomers, longer living periods and technological advances in medicine will contribute to greater demand for health care.

The demographic changes are expected to create a strong need for some professions and occupations. HRSA forecasts included a 10 percent growth in nursing positions by 2009. Demand for Nursing Aides, including Orderlies and Attendants, were estimated to grow by 11 percent; Licensed Practical Nurses by 8 percent; Physicians by 23 percent and Home Health Aides by 34 percent.



Source: Chart created using information from State Health Workforce Profiles for Massachusetts (HRSA, 2004).

Employment projections for 2000 to 2010 show that many entry-and advanced-level jobs will be available in a range of health care occupations. The Massachusetts Division of Unemployment Assistance projects 72,480 job openings for "Health Care Practitioners and Technical Occupations" between 2000 and 2010. Under "Health Diagnosing and Treating Practitioners" the projected growth during this period is for 49,000 jobs including 23,480 new jobs. Projections also estimate that approximately 14,060 new jobs for Registered Nurses will be created in addition to 14,940 replacement openings. Under "Nursing, Psychiatric and Home Health Aides" there will be a need to fill 13,670 new jobs in addition to 8,270 replacement openings. This information suggests that the foreign-born population, the low-skilled native population and perhaps older and retired workers may have opportunities to fill job niches that do not require extensive training.

Table 6:
Massachusetts Health Care Employment in 2000 and Projected for 2010

Occupational Title*	Employment**		Percent Distribution		New Jobs			
	2000	2010	2000	2010	Number	Growth Rate	Replacement Openings***	Total Jobs Openings****
Health Diagnosing & Treating Practitioners	122,620	146,100	3.5%	3.8%	23,480	19%	25,510	49,000
Registered Nurses	73,990	88,050	2.1%	2.3%	14,060	19%	14,940	29,000
Nursing, Psychiatric & Home Health Aides	64,770	78,440	1.8%	2%	13,670	21%	8,270	21,950
Occupational & Physical Therapist Assistants & Aides	3,470	4,710	.10%	.10%	1,240	36%	1,020	2,270

Source: Prepared using tables from Commonwealth of Massachusetts Employment Projection 2000-2010, Data on Current and Projected Employment and Education and Training Requirements, Massachusetts Division of Unemployment Assistance. Access at: http://lmi2.detma.org/Lmi/pdf/1030_0204.pdf.

Note: * Listed for only those occupations providing 100 or more jobs; ** Includes self-employed; *** Replacements represent the number of job openings expected to arise from the need to replace workers who retire or move up the career ladder; **** Total job openings represent the sum of new jobs and replacements.

The Nursing Shortage and Nursing Vacancy Rates

One of the most common roles in the nursing profession is that of the "Registered Nurse" (RN), which is a state certification bestowed after a candidate completes an accredited academic program (in a four-year university with a BSN degree or a two-year college with an Associate's degree) and passes the National Council Licensure Exam – Registered Nurse (NCLEX-RN). There is a severe nursing shortage in the U.S. that is predicted to worsen in coming years (Hassmiller & Cozine, 2006; HRSA, 2002; Unruh & Fottler, 2005).

A number of factors have contributed to the current, long-lasting nursing shortage in the U.S. The need for RNs has been rising and is predicted to continue to rise for some decades. Leading the reasons for this increased demand is the aging and increased morbidity of the baby-boomers. The U.S. Census Bureau predicts that there will be 7 million people in the U.S. over 85 years old by 2020 (Bureau of the Census, 1996). Another factor is the conversion of certain health conditions from fatal to chronic such as HIV and pre-term birth. Also, some technological advances, such as organ transplantation, have and will continue to increase the need for nursing care.

Concurrent with this projected demand is a projected decreasing supply of nurses. Factors contributing to that decrease include the mean age of nurses, which is high. Forty percent of nurses will be older than 50 in 2010 (Buerhaus, Staiger, & Auerbach, 2003). However, nursing schools are turning away qualified applicants for lack of nursing faculty (AACN, 2005a).

Further, downsizing and health care "reforms" of the 1990s tremendously demoralized the nursing workforce (Corey-Lisle et al., 1999; Nevidjon & Erickson, 2001). They contributed to early retirements, discouraging entrance into the field and caused many full-time RNs to move to part-time employment (Shindul-Rothschild, Berry, & Long-Middleton, 1997). Buerhaus, Staiger,

and Auerbach (2003) found signs of a strengthening workforce but not nearly enough positive growth to meet projected demands. Interestingly, they found that increases were somewhat due to middle-aged women (who will not have careers as long as women in their 20s) entering the field, along with immigrant nurses coming from abroad. About three fourths of immigrant nurses working in the U.S. are educated in the Philippines. Other countries of origin include the United Kingdom, India, Nigeria, Ireland, Canada and Poland (Davis & Nichols, 2002).

In Massachusetts, virtually all health care agencies have acknowledged the current and projected nursing shortage and the dangers associated with it. Registered Nurses (RN) dominate all other occupations among health care professionals in the state. There were 76,350 RNs employed in Massachusetts in 2006 (Commonwealth Corporation, 2007). About 65,190 were working in the health sector, and about 3,000 were employed by the government. A substantial number were employed in educational institutions, pharmaceutical companies or insurance firms. Following RNs in numeric importance were Nursing Aides with 40,330 employed in the same year. They represented almost half of all health support workers. High numbers of health care support workers were employed as Home Health Aides (16,750), Medical Assistants (9,490), Psychiatric Aides (7,260) and Dental Assistants (6,370) (Commonwealth Corporation, 2007). It is important to note that about 30,000 RNs who are registered in Massachusetts do not practice in the state (Commonwealth Corporation, 2007).

As stated by a report by the Commonwealth Corporation, "The further down the nursing career ladder you go, the more racially and ethnically diverse the occupation is.… The occupations of nursing aide and home health aide employ proportionally five times as many African-Americans and nearly twice as many Hispanics as the whole state" (Commonwealth Corporation, 2007, p. 32). Registered Nurses are the least diverse among the three occupations. Only 4 percent of RNs are African-American and 1 percent are Hispanic. By contrast, about 20 percent of Nursing and Home Health Aides are African-American and 8 percent are Hispanic. While there is some overlap between the U.S. minority labor force and the foreign-born labor force, they are not equivalent. As a result, it is very likely that many foreign-born Nurses and other health care support workers are not accounted in these figures, which classify workers by race and ethnicity and not by foreign descent.

One strategy to alleviate the nursing shortage in Massachusetts and the U.S. has been the recruitment of ethnically diverse (Nevidjon & Erickson, 2001; Newell-Withrow & Slusher, 2001) and immigrant nurses (Buchan & O'May, 1999; Kingma, 2001). If a foreign-born person wants to become an RN in the U.S., s/he has two options. S/he must either go through the same process aspiring nurses go through (accredited school and NCLEX-RN) in the U.S. or prove that his/her training in a school abroad is equivalent. This is arbitrated by an organization called the Commission on Graduates of Foreign Nursing Schools (CGFNS). Applicants must pass the CGFNS qualifying test, pass the Test of English as a Foreign Language (TOEFL) and then pass the NCLEX-RN. All or any of those components can be quite challenging to a foreign-born RN aspirant. Significantly, U.S. nurse training is among the most comprehensive and high-level in the world, so workers who are considered "Nurses" in most countries in the world are neither trained to the level of U.S. trained RNs nor perform the same functions in their home countries. Therefore, the CGFNS must inform many RN aspirants that their prior training does not qualify them to take the NCLEX-RN and that they must start their professional education anew in the U.S. if they want to pursue a career as an RN here. For many, even if they are able to obtain a student visa, taking time away from gainful employment and paying tuition is not a feasible option. From 1989 to 1995, the Immigration Nursing Relief Act facilitated nurses' immigration into the U.S. but that legislation was allowed to sunset.

A new law to allow more green cards to be issued to immigrant nurses passed the Senate in May of 2006 and went into effect in 2007.

The health care industry in Massachusetts has been experiencing persistent and constant vacancies pointing to the great need to train residents in health-related occupations. Actually, the industry had the highest number of vacancies of any sector in the state (17,621 in the fourth quarter of 2006 out of a statewide figure of 92,639). Among health care professionals, almost half of the vacancies were for Registered Nurses (4,581 or a vacancy rate of 6 percent) (Commonwealth Corporation, 2007, p. 33). For other occupational categories in the sector, the picture was not much different. According to the Commonwealth Corporation, "the average vacancy rate for the health care practitioner and technical education group was 4.4 percent in the second quarter of 2006." Similarly, "for the health care support occupational group, the total vacancy rate was 4.5 percent (Commonwealth Corporation, 2007, p. 34). Such vacancy rates have remained steady across cyclical fluctuations and years since the first Massachusetts Job Vacancy Survey in 2002 (Commonwealth Corporation, 2007, p. 33).

Workforce and health care sector development policies in Massachusetts must acknowledge that meeting the labor force needs of the health care sector requires viewing the problem with a much more complex lens than the narrow and conventional supply and demand explanations of labor shortages. The health care sector is shaped by thick regulatory forces, rapid technological change, epidemiological dynamics, shifting labor supply demographics, the complex participation of institutional actors ranging from the state to global health insurance and health care companies and even by the privatization and restructuring of health care systems abroad. It is not easy for foreign-born workers to navigate this complexity, and they could certainly become stronger participants if closer attention is paid to their qualitative and quantitative importance.

HEALTH CARE QUALITY AND DIVERSITY

Workforce Diversity and Cultural and Linguistic Competency: Findings from the Literature and Interviews with Key Informants

A major discussion within the health care industry is how it can improve the quality and delivery of health care services. One argument gaining currency within the discourse on patient quality and service is around workforce diversity and cultural and linguistic competency especially within ethnically diverse urban communities. A significant number of the nation's leading research hospitals, university-run medical clinics, medical laboratories and biotechnology/pharmaceutical companies are located within metropolitan areas in close proximity to ethnically diverse and economically disadvantaged neighborhoods (such as Boston, New York and Baltimore). It would make sense for them to invest in the education, skills and health of the local community (Hutson, 2006). These institutions account for a large number of jobs within urban areas, and they very seldom relocate to the suburbs or overseas as many other firms do. In fact, a survey of the top 10 private employers in the largest 20 U.S. cities found that nearly 550,000, or 35 percent, of the 1.6 million people who worked for the top ten private employers were employed by institutions of higher learning and medical facilities (Harkavy & Zuckerman, 1999). This is significant because foreign-born individuals continue to migrate to the U.S. and still tend to locate in central cities and metropolitan areas although recent evidence suggests that migration patterns are changing slightly. Immigrants represented a fourth of all labor growth during the period 1980-2000 and are likely to account for an even larger percentage of the growth over the next 20 years (Holzer & Waller, 2003).

This demographic shift poses new opportunities and challenges for health care providers. The increased labor shortage of health care professionals can be met by incorporating some of these workers. Increasing ethnic diversity in the workforce could begin to reflect the ethnic and cultural diversity of many urban communities resulting in a decline of socio-cultural, economic and racial/ethnic health disparities (Hutson, 2006). This is crucial given that the "… provision of medical care to culturally diverse patients now relies more heavily on cross-cultural communication than at any other time. Medical care that addresses the cultural needs of diverse populations stands at the forefront of many discussions in the health care industry" (Chong, 2002).

The demand is stronger than ever for culturally and linguistically competent health care workers who can deliver care to immigrant and minority populations that is compatible with their cultural beliefs, practices and preferred language (Chong, 2002). This includes "patient recognition of variations in symptoms; thresholds for seeking care; the ability to communicate symptoms to a provider who understands their meaning; the ability to understand the prescribed management strategy; expectations of care (including preferences for or against diagnostic and therapeutic procedures); and adherence to preventive measures and medications" (Betancourt et al., 2003). In a recent review of 34 studies that evaluated interventions designed to improve the cultural competence of health professionals, Beach and her colleagues found that cultural competence training shows promise as a strategy for improving the knowledge, attitudes and skills of health professionals (Beach et al., 2005). Another study (Cooper & Powe, 2004) found that recent research on how patients rate the quality of care they receive from physicians has described differences between race-concordant and race-discordant patient-physician relationships. In situations where patients were in race-concordant relationships with their physicians, patients rated their physicians' decision-making styles as significantly more participatory and their care more satisfactory overall compared to patients in race-discordant relationships (Cooper & Powe, 2004).

In the long run it appears that increasing the ethnic diversity and cultural and linguistic competency of the health care workforce can improve patient care and make prevention and awareness programs focused on specific ethnic groups more effective. Thus, hiring workers from immigrant and minority communities could be mutually beneficial for everyone involved including the health care providers, patients and the community at large (Hutson, 2006). Many states with large immigrant and diverse populations such as California, New York and Texas have already developed programs to attract more minorities, many of whom are foreign-born, to the medical profession.

Culturally-Competent Care

In the last several years the health care industry has become more aware of the need for culturally-competent care. Researchers and advocates across the spectrum of health care disciplines have identified the need for culturally sensitive communication and interventions that take culture of the patient into account (Betancourt et al., 2003; Giger et al., 2007; Office of Minority Health, 2001, p. 10).

Public health officials at the highest levels have called on the health care industry to improve cultural competence. They have recommended several strategies including improving language skills, hiring minority workers and training health care workers in cultural competence. Interestingly, key informants identified all these goals as assets that foreign-born workers bring to their delivery agencies. Specifically, being able to serve patients in their first language, understanding their cultural needs, providing cross-cultural communication and cultural training for native-born health care staff were all identified as crucial services among the agencies interviewed for this report.

Ethnic diversity among health care professionals has also been promoted as a way to improve health care quality in general (Institute of Medicine, 2003; Mullins et al., 2005), and cultural competence has been shown to improve patient satisfaction and health care outcomes (Koehn, 2006). The Institute of Medicine (IOM) argued that "increasing racial and ethnic diversity among health professionals is important because evidence indicates that diversity is associated with improved access to care for racial and ethnic minority patients [and] greater patient choice and satisfaction" (IOM, 2004, p. 1). The IOM specifically recommends increasing diversity of background, language ability and experience among health care professionals. The Sullivan Commission argues that the increased cultural competence of diversifying the health care workforce will in turn decrease health disparities (Sullivan Commission, 2004), which has become a national health goal (Department of Health and Human Services, 2000; IOM, 2003). Cultural competence at the service level increases the quality of care and patient satisfaction in general, no matter who delivers that care. Minority staff are likely to have more cultural and linguistic fluency as well as the ability to quickly earn the trust of their patients.

Further evidence suggests that greater diversity can improve the cultural competence of health professionals and health systems and such improvements may be associated with better health-care outcomes. In addition, greater diversity among health professionals has the potential to improve the clinical research enterprise and to lead to new developments and improvements in health care and how care is delivered (IOM, 2004).

Many key informants reported high patient satisfaction rates from patients with similar minority backgrounds as their health care providers. They felt that the workers had a direct positive impact on quality of care. "We have [patients] who come in here that might not present to other places because I think partly of the experience and characteristics of our staff," said Donna Rivera of the Greater Lawrence Family Health Center when referring to their Dominican patient population.

The theory is that minority patients feel more comfortable seeking medical care from minority health care providers who can understand their cultural background in terms of customs, attitudes and beliefs as they relate to health. In addition, minority patients may be receptive to culturally-competent, non-minority providers who they believe are trustworthy and treat them with respect. Having a diverse health care professional workforce that is also composed of culturally-competent, non-minority professionals is a critical element in making health care accessible to those who need it most (Mullins et al., 2005, p. 1979).

Increasingly diverse health care staffs strengthen the ability to meet the varied needs of Massachusetts communities: "Greater diversity among health professionals is associated with improved access to care for racial and ethnic minority patients, greater patient choice and satisfaction, better patient-provider communication and better educational experiences for all [health professions] students" (IOM, 2004, p. 5).

According to key informants, being able to serve patients in their first language improves vital communication, which reduces errors, increases patient adherence to recommended treatments and increases patient satisfaction. This finding agrees with Koehn's study of cultural competence being associated with patient satisfaction (2006). Understanding patient culture and cultural needs also increases quality of care because differing styles of communication can be artfully managed. Patient needs and barriers to care are better understood and patients feel more respected and known. This sense of being "known" has been identified by minority patients as vital in trusting health care services and successfully accessing services: "Person-to person. Trust is the fundamental issue. Because it's not institutional, we always have to remember: it's personal.[4]"

Patient-Provider Cultural Concordance and Culturally-Competent Care

Perhaps the most critical need that is filled by foreign-born workers in the Massachusetts health care industry is providing culturally-competent care for communities of their same culture. Key informants from a number of agencies identified this need explaining that the communities they serve are often majority-minority populations. Cities like Boston, Lowell, Framingham, Lawrence, Springfield, New Bedford and others have large and growing minority populations as illustrated elsewhere in this report:

> "The more we have [staff] from the communities we serve, the more they're going to understand the needs of our patients and clients and the more they can inform those of us who aren't from those communities about best ways to serve those communities. So [they are] really key to our being able to most appropriately and most relevantly provide services."[5]

Not just patients themselves but also family members are reassured and understood better by culturally similar workers in their attendant health care facilities. As Bob Ingala, Executive Director of the Greater Lawrence Family Health Center and member of the Health Disparities Council of Massachusetts, explained, "Having folks who understand the culture, are able to speak the language and be that kind of liaison for the family members is really important to quality care." Informants told stories about connections and interventions that health workers were able to accomplish that were positively influenced and/or significantly enhanced by their own biculturalism.[6]

Some reported that because workers shared the same culture as their patients, they could achieve things that would be difficult or even impossible for providers not sharing that culture. Sharing the culture results in understanding and trust. One administrator recounted a story in which a patient's life was saved because an alert nurse prevented that patient's suicide. The cues that the nurse picked up were entirely culturally based: "I'm sure it saved this woman's life just because [the nurse] was so connected to the community. . . . There is a lot of that kind of thing that happen literally every day.[7]" This concept of trust is significant especially

with marginalized populations and within the health care arena. A lack of trust can be a crippling issue preventing vital communication between patient and provider. Dean Cleghorn of the Greater Lawrence Family Health Center expounded on that ability of his foreign-born colleagues to build trust:

> "I had one of the non-foreign-born providers say to me, within the last month, how absolutely essential it is to have the [Dominican and Puerto Rican] medical assistant staff that we have. . . and that without them there would be almost no way he could connect to the community. They do so much to bridge a number of gaps. . . . It really is an ability to become part of the community in ways that you can't without that entrée. And the issue is trust."[8]

The Institute of Medicine also sees advantages to having heterogeneous health care staffs aiding one another: "Greater racial and ethnic diversity in health professions may offer broad benefits to help improve health care access for minorities and improve the cultural competence of all health care providers and the health systems in which they work" (Institute of Medicine, 2004, p. 24).

Foreign-Born Workers Increase the Quality of Care for All Patients

In addition to providing quality and culturally-competent care to patients who share their own cultures, foreign-born health workers were identified by key informants as providing excellent care to patients from other cultures. Some informants noted that foreign-born workers bring a special understanding about what it is like to be an immigrant, refugee or sojourner that benefits other minority populations. For example, although new users of a certain Massachusetts mental health center tend to be African, the East Asian staff has an understanding of the new migrants' refugee and trauma experiences based on their own recent history:

> "Even though they're very different people, very different cultures, they feel very comfortable at Mental Health Center because people understand their refugee experience. And there's a certain way also of relating, which is a little similar, a little softer, a little more welcoming."[9]

An administrator at another health care center explained that having minority and immigrant staff contributes to a sense of openness in the agency as a whole. It creates an atmosphere into which the patient walks that can have significant impact on that patient's readiness to engage: "Because we're a multicultural organization, as the community grows and we get additional cultures, I think they feel comfortable coming to us because we've already established that multicultural environment that welcomes everyone regardless of where they're coming from."[10]

In addition to contributions like language interpretation, cross-cultural communication and cultural-competence training that foreign-born workers make, several key informants mentioned less tangible assets that foreign-born health workers bring to their patients. One nurse manager said that her many foreign-born colleagues brought an extra dose of compassion to their work, which she thought came from their trans-cultural experiences: "I think compassion comes from the people … foreign-born workers bring in some knowledge based on the experience that they saw in their country. So they're able to apply it in their care of the elderly here[11]." Another nurse manager cited the determination of his foreign-born staff calling them "incredibly hard-working." Normita Ronquillo, a nurse manager at a rehabilitation center, mentioned the effect that having experience in more than one culture can make you more open to seeing patient care differently. For instance:

> "There's a basic principle where we all came from. We have no nursing homes; you take care of the elderly in your house…. [Foreign-born workers say to themselves], I need to take care of this person because if she was my grandmother or my grandfather, I'd be taking care of them at home."[12]

She went further, saying that being transnational automatically makes you empathetic with those in

need: "There's an extra dynamic of compassion . . . you get drawn in."[13]

Cross-Cultural Communications and Cultural-Competence Training to Colleagues

In addition to providing direct culturally-competent care, foreign-born workers provide cross-cultural communications between patients and culturally-dissimilar staff or even formal training to their colleagues about cultural issues. The first and most common way foreign-born workers aid their health care colleagues is linguistic interpretation for non-English speaking patients. This is a basic but vital concern. The Office of Minority Health sets this standard:

> "Language services include, as a first preference, the availability of bilingual staff who can communicate directly with patients/consumers in their preferred language. When such staff members are not available, face-to-face interpretation provided by trained staff. . . is the next preference." (Office of Minority Health, 2001, p. 10)

More than literal translation, however, skilled medical interpreters provide cross-cultural communication between patient and provider. They negotiate the sometimes subtle and often critical cultural variations that could make the difference between harmonious patient-provider communication and acrimonious misunderstanding: "Foreign-born people really do everything here. One of the roles of our medical assistants is interpreting and that is a critical function. Because at the same time they're interpreting, they're being the cultural broker."[14]

Further, there are many cases in which a foreign-born worker can formally train the rest of his/her health care team on cultural points improving the quality of care provided by the agency as a whole. One key informant cited a Cambodian nurse teaching the rest of her home care colleagues about the intricacies of Southeast Asian diets and how they could adjust their diabetic teaching to be more relevant and meaningful to this population. Another health care worker mentioned a South American physician who was able to give her clinic's HIV team information about infectious tropical diseases that they otherwise would not know.

Health Disparities

Notably, Healthy People 2010 and other organizations have identified health disparities between minority and majority populations as among the most important public health goals to address this decade (Department of Health and Human Services, 2000; Institute of Medicine, 2003). The Sullivan Commission (2004, p. i) claims that "the lack of minority health professionals is compounding the nation's persistent racial and ethnic health disparities." The Commission further adds, "Diversity is a key to excellence in health care. To achieve that new vision, care must be provided by a well-trained, qualified and culturally-competent health professions workforce that mirrors the diversity of the population it serves" (Sullivan Commission, p. 2). Mullins et al. (2005) contend that one "successful strategy for reducing health care disparities involves increasing the representation of racial and ethnic minorities among health care providers." As the above interviews with Massachusetts' health managers attest, providing culturally-competent care, including care by health care professionals of the patients' own backgrounds, benefits the health, adherence and patient satisfaction of minority populations. Thus, it can be one strategy to address health disparities. Currently, as the state continues with the implementation of its young health reform, the incorporation of foreign-born workers into the labor force of the health care sector should become a clear policy concern. Their incorporation could meet critical labor shortages and help reduce health disparities.

E's story – a 45 year old woman from the Congo and Home Health Aide in Assisted Living Facility for Alzheimer patients. This story is being told anonomously because E. and her family remain in danger as refugees from Congo.

To save my life, I escaped from Congo, my native country in Africa. My mother is Rwandian and my father is Congolese. I lived all my life in Congo and married a Congolese man and we had ten children together. But when the internal fighting between Congolese and Rwandians began hard in 1997, things got very bad. There was no food, no money and people were angry. One day, some people came to my house and said I had to leave right then because I was part Rwandian and would be killed as a traitor if I stayed in Congo. They said I had to go or I would be burned to death.

It was so terrible to leave. We had a very good life in Congo. I had a business making clothes and my husband traded these clothes and other products - often for gold and diamonds. I was taken to Catholic Charities a couple of hours away where I stayed for one year. I was so depressed. I could not eat or sleep and cried all the time thinking about my husband and my children. I could not talk to any of them and it was so terrible for my children. I didn't know what was happening with my mother, brothers and sisters. Later, I found out that they were also forced to leave.

Catholic Charities advised me to go to America and then work to bring my family there. In December of 1998 they gave me a passport, dressed me up as a nun and put me on a plane through Paris to Boston. I was then taken in by a family where the wife's mother had been helped by my husband in Congo.

I lived with them for two years and they were very good to me. They helped me find a lawyer to get asylum and approval for my family to come here. The lawyer told me to go to the Red Cross to communicate with my family. It wasn't easy to find them because the children's names had been changed to protect them. Finally I got a letter with my phone number to my husband through a friend visiting Congo. One day in July of 1999 at 5 AM, my husband called me. He and my children couldn't believe I was alive. I spoke with all my children who were all okay but no one knew where my mother, brothers and sisters were.

My life began to change and in June 2002, I was able to bring four of my children here. My husband and six others followed by 2006. Life is much better. My children are doing well in school, playing soccer and basketball. Three are in college studying for nursing, education and international business.

I learned English at The Immigrant Learning Center starting in 1999 and have been working as a Home Health Aide for many years. When I developed back problems and couldn't lift patients anymore, I became a Health Aide in an assisted living residence for Alzheimer patients. I work in a team for their care. We have become a powerful family. We know each other very well; we are connected. We know who doesn't eat well or sleep well and we can find strategies to help them. The patients have become part of us. They greet us with enthusiasm. You have to have patience and my experience with my kids has taught me patience. I like {the job} because I am helping. Many people helped me along the way and this way, I can give back.

I want to thank Americans because they didn't know me, but they accepted me. To help Americans understand how hard it is to leave your country, I want them to think about their grandparents and great grandparents, how hard it was for them to come here. I think of myself as the rock in America - the foundation for my children, my future grandchildren, to build their life here. I want to stay in this land that doesn't have a problem with me because of where I was born and where we can live in peace.

Chhan Touch – Nurse Practitioner at Lowell Community Health Center and Father of Two Children, 7 and 9 Years.

Chhan Touch's journey to being a Nurse Practitioner at the Metta Center at Lowell Community Health Center and pursuing a PhD in Nursing has been long and arduous. It started in refugee camps in Thailand where Chhan fled to escape a violent war in Cambodia when he was just 11 years old. He entered the camps in 1984 and there he had the good fortune to meet an American couple who were professionals in Nursing and Psychology. They encouraged Chhan to pursue an education. After four years in the camps, he was able to come to America through sponsorship by his sister who was already in the United States.

"I was severely traumatized by the war and very angry. {But] in the camps, I became a Christian and that helped tame my anger and bitterness. And in the camps, medicine became my passion." When Chhan came to the U.S. in 1988, he lived with the American couple he had met in the camps who became his foster parents. Residing in Connecticut, he progressed through Manchester Community College, the University of Connecticut and graduated from Atlantic Union College. In 2000, he received a Master's degree in Nursing from the University of Massachusetts Lowell and became a Nurse Practitioner.

In August 2000, Chhan started work as a Nurse Practitioner at the Metta Center of the Lowell Community Health Center to focus his practice on Southeast Asians. His work there started to pay back school reimbursement costs given by the state. But a two-year contract has turned into a long-term commitment and a chance to give back to this country and the Southeast Asian community. At the Metta Center, he works extensively, but not exclusively, with the Cambodian population. Chhan says that he understands Cambodians and their culture, knows how they suffered and how to relate to them. He speaks three languages including Khmer, the Cambodian language. His patients, who range from one week to 99 years, bring the usual array of medical issues such as infections, pain, heart problems, high blood pressure and diabetes. [But} "I can understand them faster and better and I can work with their cultural beliefs and practices about health." Chhan says that his background has also helped him learn about and be respectful of other cultures.

Along the way, Chhan developed a book describing Cambodian history from 1975 to 1984 that also describes his personal journey in the refugee camps. He hopes to get the book published soon. He intends to do his dissertation research about diabetes in the Cambodian population. Cambodians, he says, are prone to insulin resistance and, therefore, have a high rate of diabetes. He believes that the research will be the first scientific study of this phenomenon and will make a major contribution to treating diabetes among Cambodians. But what he wants to express is his gratitude to America. "People here moan and groan but this is a wonderful country and freedom is intoxicating. Anyone who is willing to work hard can find opportunities. I found opportunities and being able to give back is a great feeling."

PROMISING PRACTICES AND PROGRAMS TO IMPROVE LABOR MARKET OUTCOMES FOR FOREIGN-BORN HEALTH CARE WORKERS

General Conditions for Workforce Development in the Urban Health Sector

In Massachusetts, various policies and programs are in place to improve the labor market outcomes for foreign-born health care workers. Whether led by government agencies, managed by nonprofit organizations, coordinated by institutions of higher education or initiated from within the industry itself, some of these efforts have led to improved outcomes for foreign-born workers in the health care sector. This section primarily discusses emerging and promising workforce development practices in Massachusetts health care programs, which serve foreign-born workers.

There are three concurrent phenomena happening in metropolitan areas throughout the United States. First, expansive medical industry complexes that include medical hospitals, clinics, research centers and private firms are co-located in many major metropolitan areas. Secondly, many cities have experienced an influx of new immigrants who have diverse levels of English proficiency, formal education or vocational training. Thirdly, high vacancy rates exist in low- and moderate-skilled health care jobs, which frequently show high levels of turnover. These jobs are often filled by foreign-born workers whose limited English proficiency and insufficient basic math and computer skills limit their access to career advancement and induce low job satisfaction. Foreign-born workers often face different challenges than their American-born counterparts in entering and remaining in the workplace whether due to language barriers, the lack of formal education or their local family and support structures. Therefore, new strategies are required to overcome those challenges. Many current public and private workforce development policies have not kept pace with the changing needs of the health care labor market and its workers. As a result, companies experience retention problems, workers miss out on advancement and earnings opportunities and patients miss out on high-quality care.

A first-line, but rarely used, strategy for improved retention and promotion rates is to improve recruitment strategies, ensuring that new hires have the technical and interpersonal skills to succeed and the aptitude to advance. More investment in better recruitment policies pays off by reducing turnover and improving care (Prince, 2006). The initial investment may well deter most employers, which is indicative of a larger issue related to employer commitment to meaningful workforce development policies. For instance, employee education and development cannot be seen as an end in itself; it is best incorporated as a larger strategy of organizational development that takes into consideration current staffing resources and future needs. Similarly, workforce development policies should not be viewed as temporary strategies to fund. They must be incorporated and developed for the long term even if initial funding comes from foundation or government sources. Program development is an ongoing effort that requires a constant commitment to understanding and responding to the changing workforce needs of the organization and its employees (Lemay & Messier, 2005).

Implementing meaningful workforce development policies such as the one described below requires multiple points of focus. One characteristic that is associated with successful initiatives is a dual focus on health care workers' mobility into and upward through the workforce and on employers' ability to support and further their development. For example, workplaces that foster learning environments by making education and advancement a central part of the organizational culture do so by providing a formal means for workers to advance their careers and compensating them accordingly. This may also include better training for managers so they have the capacity to mentor staff and support their educational and career goals (Wilson, 2006).

A parallel strategy with some success is to have education and training programs that help adult working students balance the competing demands of work, school and

family by providing supports like access to child care or transportation so that workers can gain the credentials they need to advance their careers (Wilson, 2006). Combining workplace and educational-institution strategies is even more effective. For example, there are two CNA-to-LPN (certified nursing assistant to licensed nurse practitioner) programs in Massachusetts in which long-term care employers collaborate with local community colleges to deliver a full sequence of courses from basic math and English skills training in the workplace to customized evening LPN programs. As a result of these programs, the employers have reaped financial benefits, the patients have experienced improved care and staff retention rates have improved (Silverston & Rubin, 2006).

Research shows that in order to address health care workforce challenges in the long-term, multiple approaches must be used to impact the myriad of issues both from a supply and a demand perspective. To address the issues in a comprehensive manner, collaborative efforts among federal, regional, state and urban actors are required both to fund and to implement appropriate programs. While these initiatives take many forms, some of the most promising initiatives are large and multi-sectoral funded from public and/or private sources. Partnership projects like these spread costs over multiple actors, which is an asset in uncertain funding environments. In addition, these cross-sectoral partnerships can help address other underlying causes of the health care worker shortage including public policy around wages and changes in training institutions for health care educators (Wilson, 2006). While partnerships often produce the most effective outcomes, they can also be the most challenging types of programs to operate because participating organizations must have the capacity to dedicate time and resources to developing and maintaining the partnership. These include communications, documentation and staff expertise. In addition, research increasingly shows that individuals are the core of successful partnerships and more important than the processes that define them (Hebert et al., 2007; Lemay & Messier, 2005). Good partnerships are bolstered by strong leaders who drive the efforts from within each partner and are committed to a clearly articulated and agreed-upon set of rules to govern the partnership.

One clear need that spans the sector is that of more financial and technical support for workforce intermediaries. This would enable them to develop and implement innovative workforce strategies now and to continue innovating as the sector's needs change over time (Prince, 2006; Wilson, 2006). Intermediaries can also engage in advocacy efforts, work to impact systems-level changes and help build the capacity of other organizations to implement partnerships (Hebert et al., 2007). A second need is for widespread acknowledgement that workforce development strategies are good investments. That means that employers, both upper- and mid-level managers, need to be convinced that their initial investments in time and other resources will pay off. Finally, it seems necessary to collect more data, produce analyses and disseminate the outcomes around these types of programs. This could include clearly articulated, even uniform, performance measures and standards for reporting in order to enhance accountability and comparison of programs' performance (Hebert et al., 2007; Prince, 2005; Wilson, 2006).

Massachusetts Programs

Bunker Hill Community College: The Boston Welcome Back Center. Started in October 2005, the Boston Welcome Back Center is a partnership between Bunker Hill Community College, Massachusetts Bay Community College, Massachusetts Board of Higher Education, Roxbury Community College and the University of Massachusetts Boston that is focused on serving internationally-educated nurses. The Welcome Back Center's mission "is to build a bridge between the pool of internationally educated nurses and the need for linguistically and culturally-competent health care providers in

underserved communities."[15] Through a system of Individualized Case Management support, the Center has developed a career pathway plan that builds on each nurse's strengths, skills, experience and education including the Massachusetts licensure process, Commission on Graduates of Foreign Nursing Schools (CGFNS) exams, Professional Credential Services Inc. (PCS), educational support, English language classes and volunteer opportunities. There have been 260 active participants. To date, 51 percent completed the program's credential exam, 17 percent passed the English proficiency exam and 19 percent passed the National Council Licensure Exam for Nursing.

Northern Essex Community College's Learning Enrichment Group Program (LEG): A Nursing Education Initiative of the Massachusetts Board of Public Higher Education. The Nursing Education Initiative was established in 2003 with funding from the state legislature. It is a partnership among the Board of Higher Education, the Massachusetts Hospital Association and other stakeholders that tackles the nursing shortage problem from two angles: the shortage of health care workers, nurses in particular, and the shortage of nursing educators. In so doing, it aims to rapidly increase the number and quality of skilled health care workers and nursing faculty as well as the capacity of public higher education nursing programs. One way the Initiative achieves its goals is to provide funding to public higher education institutions that run related programs. This funding supported the Learning Enrichment Group (LEG), founded in 2005. LEG is a curriculum focused on increasing the number of bilingual and bicultural nurses who enter the Merrimack Valley workforce by supporting their efforts for upward career mobility. Through one project, the LEG provides coaching to assist bicultural and bilingual nursing graduates to take the NCLEX-RN exam. Through a second project, the LEG provides support for licensed practical nurses (LPN) who, through an advanced placement process, enter the second year of the A.S. in Nursing option.[16] Another program funded under the Nursing Initiative is the University of Massachusetts Boston's Alliance for Success. The Alliance for Success is a program to strengthen family support and involvement to increase the potential of urban, commuter students to persist in pursuing a nursing major especially students for whom English is a second language. The Alliance for Success also seeks to increase the supply of culturally competent nurses. In 2005, there were 11 active participants in the exam preparation program and eight passed the licensure exam. In that same year, two LPNs participated in the Advanced Placement program and continue with preparation for licensure exam.

Boston Health Care Research and Training Institute/Jamaica Plain Neighborhood Development Corporation. The Training Institute officially began in 2002 as a partnership between eight major employers in the health care and research sector. It grew to become a workforce intermediary comprising 26-plus partners: 11 employers (including all the largest health care employers within the Longwood Medical and Academic Area), 15 organizations of higher education, a labor union, the Boston Private Industry Council, social service agencies and community organizations. Managed by Jamaica Plain Neighborhood Development Corporation (JPNDC) in partnership with the Fenway Community Development Corporation (FCDC) and the Mission Hill Network, the Training Institute provided free workforce development training, education and social service support to under-skilled, economically disadvantaged individuals who resided primarily in the Fenway, Jamaica Plain, Mission Hill and Roxbury neighborhoods of Boston. The Training Institute had the following long-term goals: improve the ability of entry-level workers to advance economically; improve the efficiency of health care employers by improving retention and filling vacancies in nursing and other allied health professions; build a career ladders model that would be replicable by other health care employers that are not currently members of the Training Institute and that would lead to greater collaboration among employers; create a permanent Training Institute in the

Longwood Medical and Academic Area that would institutionalize career development opportunities for entry-level workers and would provide employers with a steady source of qualified workers in areas of skill shortages; and develop a system that facilitates the hiring of neighborhood residents especially from the neighborhoods surrounding the Longwood Medical and Academic Area (LMA).

Over 1,000 participated in various parts of the program since its inception. In 2007, 79 percent of the 174 incumbent workers participating improved their English and productivity and achieved wage increases. Sixteen percent were verified merit-based increases and nine percent had job promotions. Twenty-eight participants in the pre-college program enrolled in college programs for nursing and surgical technology.

Although the Training Institute succeeded in getting disparate stakeholders involved in building a health-care workforce, the partners decided in 2008 to provide some training in-house for their own workers and merge the broader institute into Jewish Vocational Services (JVS). The newly created Health Care Training Institute at JVS provides education and training to incumbent workers in the Longwood Medical area and includes English language classes, career coaching and college preparation. A pre-employment program was also established in collaboration with a community-based organization for residents of the Mission Hill area of Roxbury. Today the Health Care Training Institute has broadened its reach beyond the Longwood area to a dozen major health-care centers in Greater Boston.

Challenges to Promising Practices

Workforce development intermediaries such as those presented above must invest significant resources to tackle strong service-delivery challenges related to the populations they serve. Some of these challenges simply have to do with the complexities of participants' lives when they have multiple responsibilities in their personal lives outside of work. For those seeking licensure, there is often difficulty in getting records from their home countries, which slows down their progress here. Thus, the Boston Welcome Back Center noted that these challenges must be addressed at the beginning of the program to define potential success as a function of those challenges and not as a function of some artificial measures of performance. Another challenge, brought up during our interviews with the Boston Welcome Back Center and the LEG, had to do with integrating their foreign-born students into existing nursing programs at community colleges. As a possible response, the Massachusetts Bay Community College is considering establishing a special cohort for these students. Another avenue implemented by faculty in the LEG program is to provide one-on-one support outside of the classroom to students with extensive working schedules. The LEG faculty also pointed out that in order to implement this type of program successfully, the administration of the college needs to be fully supportive. The administration needs a reminder that short-term success enrolling and graduating a diverse student body is somewhat more difficult than in less diverse institutions. This is similar to the organization-wide commitment required for successful implementation of employer-based programs.

Other programmatic challenges relate to the development of a set of shared and realistic expectations between employers and the intermediaries. Employers' needs for English-fluent workers often may supersede the needs of foreign-born workers who require more time to learn English and other basic skills to enter and advance in the workforce. As a result, employers often expect foreign-born workers to advance more quickly through the programs. Our interviews with the Training Institute revealed that it is difficult to get funding for entry-level community programs because employers are not willing to commit the funds (as much as $2 million per year) to support training for these types of workers. Employers prefer

investing in more skilled workers whose advancement happens more quickly and smoothly. In addition, they have faced some difficulties in recruiting participants who are well-suited for their programs.

A final set of challenges relates to the sustainability of collaborative programs. The Boston Welcome Back Center expressed concern about getting all partners to share an equal burden of cost and time. One of the Center's Board members said that the Massachusetts Board of Higher Education should have provided more funding and served a greater coordinating role to ensure that the limited resources are spent wisely and not spread too thin. A unique challenge to obtaining funding for these programs, according to one of the Center's Board members, is due to the anti-immigrant sentiment that is prevalent in Massachusetts and the nation. Such sentiment contributes to reduced federal and state funding opportunities. While foundations have been sympathetic, they have not provided more funds. Instead, they call for more data.

Our research confirms that partnerships are beneficial and produce worthwhile outcomes but are also challenging and take resources to develop and maintain. In terms of benefits, the Boston Welcome Back Center pointed toward sharing resources and financial responsibility as tangible benefits. For example, Mass Bay Community College and Roxbury Community College set aside space for educational case managers to use one day each week. This enables students to have cross-campus enrollments in whatever courses they need while still having access to case managers, who take turns going to each partner institution once a week. While Bunker Hill Community College bears the burden (80 percent) of the program's annual $400,000 budget, Mass Bay Community College contributes $30,000 and Roxbury Community College contributes $15,000. One important component of the partnership is that the program has a support system in place; they have been able to build a network and have been successful in mobilizing the community resources to assist their clients. Such supports, no matter how small (for example, parking or getting library cards), remove barriers for the clients and help them succeed.

Many of the challenges of partnering mirror those found in the literature on collaborations. Partnership roles are not always very clearly defined, the level of institutional connectedness depends on the level of commitment and leadership of individuals within the partner organizations. Regular communication among partners ceased due to the cancellation of monthly Board meetings. The Training Institute also raised a new challenge involving the supervision of staff. It suggested that staff actually working for the partnership rather than one of the partner organizations report to an independent management structure and that the administrative structures should be as streamlined as possible.

The Training Institute has experienced some challenges that span the areas of sustainability and replication. The Training Institute has been discontinued; the partner organizations are taking on some of the training activities in-house and have contracted with Jewish Vocational Services to carry out other activities previously undertaken by the Jamaica Plain NDC and Fenway CDC. Some of the sustainability challenges faced by the Training Institute reach back to the different orientations of employers and community-based organizations. The hospitals, who are competitors with one another, have begun to offer in-house training for incumbent workers. Their sole focus is on training for their own employees, not those of a competitor institution. Hospitals are most likely to invest their resources in higher-skilled workers from whom they see a quicker turnaround on their investment. This strategy does not, however, address the shortage of qualified entry-level workers.

Beyond the challenges mentioned above, our research on these programs also showed important lessons for success. One key element for the success of education and training programs is support for students. The support needs to be targeted toward the situations of the students and workers those

programs are meant to address. For example, the Boston Welcome Back Center has a system of personalized case management that allows them to walk with the participants all the way through the program until they obtain their nursing licenses here in the United States. It includes a web-based case management information system that produces real-time data for staff and can be accessed by staff away from the central office location. There is a system of peer support as well as clearly defined milestones that participants have to achieve from the initial screening process to passing the national boards. Another example of a successful student support structure is Northern Essex Community College's Learning Enrichment Group (LEG), a team-taught course on topics like time management and test-taking strategies. The course meets one hour each week and uses alternative, interactive teaching approaches that often involve small groups and allow for more discussion and questions than do regular nursing courses. High-risk students can stay in LEG throughout their studies, and graduating students can even get targeted help for taking the nursing licensure exam. More specifically focused on jobs skills rather than acquiring credentials, the Training Institute has offered a different type of support, which has primarily targeted incumbent workers trying to advance in their careers. The participants worked with career coaches who oversaw their needs. Subsequently, the participants attended one of about a dozen classes, which included English language training that helps facilitate fluency in both specialized and a more general health care-contextualized professional vocabulary.

Engaging in a discussion of success also requires that we talk about effectiveness measures. Effectiveness for the Boston Welcome Back Center and for the LEG is measured largely in terms of the number of enrolled participants who obtain licensure in any given year. Smaller indicators of effectiveness include Welcome Back participants progressing toward milestones and LEG graduates working in the health care facilities that serve the diverse populations of the Greater Lawrence area. In that regard, LEG is also making progress toward achieving cultural competence since many of the LEG graduates come from the communities where they work and are familiar with the language, culture and customs of foreign-born patients. For the Training Institute, advancement rates were a primary success indicator. For example, both employees and employers reported that people who participate in the Training Institute programs perform better at work and retention rates have increased. Still, placement and advancement rates were not as high as the partner organizations had hoped (Hebert et al., 2007).

Elisa Garibaldi – Health Educator/Clinical Liaison at Lowell Community Health Center and Mother of Two Teenagers

"I was trained in general and pediatric surgery in Brazil where I practiced medicine for almost 13 years. I graduated about 19 years ago from medical school. In 1993, I was a visiting surgeon at Children's Hospital, which was an amazing experience. I came to the United States for good in 2001 to seek a better life and a better life for my children. I have not yet gotten licensure to practice medicine in the United States. When I was in Brazil, I loved to work with the community and was often the only one who would work with low-income patients. I did a lot of things for free and dealt with social problems. Here in the U.S., I have found similar opportunities to do work with the community and also work on prevention and have in-depth relationships with patients."

Elisa is currently the coordinator of the "Healthy Weight Wellness Program" and also coordinates the "Promotores de Salud", a health promotion program for Latino populations. Both are through Lowell Community Health Center. In the Promotores Program, community members are educated about a broad array of health topics such as HIV/AIDS, Women's Health, domestic violence, using medical interpreters and connecting to health services. "We, with the wellness program, do workshops, have physical activities like walking groups and provide time to socialize. We talk about Lowell's history and its resources. I found that I am a good teacher and [these programs] are like a child to me. Asians and Latinos have the same objective to be healthy and when I help them make small changes to be healthier and make their lives a little better, it makes me feel good. I miss my practice as a physician but what I am doing now is so important. Sometimes I worry that I am losing my abilities and skills but I can give more here. I understand the immigrant community – their feelings, the stress, how hard it is to adapt and missing your family."

Elisa is undecided if she will pursue licensure as a Physician or go into Public Health. Every year, she says, it gets more difficult for foreign-trained Physicians to get a license in the U.S. "I would have to do eight more years of retraining, including a residency program. Medicine is always changing, you have to study all the time and the process is very expensive. I am a single mom of two teenagers and have limited time and money to do this now. I would love to have more support to get my license here [but] I may go into Public Health. Lowell Community Health Center is very supportive and there is great teamwork here."

POLICY RECOMMENDATIONS

Several policy recommendations unfold from the major findings of this report.

1. It is essential to analyze the labor market situation of foreign-born workers in the health sector using multiple methods, research strategies and sources of data. By themselves, conventional supply and demand analyses provide an incomplete panorama of the labor market situation and the strategic importance of foreign-born workers in the health sector. This report combined a quantitative and qualitative approach to analyze the occupational, demographic and geographic characteristics of these workers as well as the quality of their contribution in the workplace as it impacts improving health care. In addition, this mixed-methods approach takes into consideration very important actors and complex institutional forces, which decisively shape the situation of foreign-born workers in the sector. This includes relations between actors in the medical-university-research clusters of cities, regulatory regimes, the health insurance industry, technological innovation, educational opportunities and certification policies.

2. The level of awareness of upper-level managers and organizations of the importance of foreign-born workers in the sector seemed uneven. Important stakeholders in the health sector, ranging from large hospitals to pharmaceutical companies and trade associations, should pay close attention and devote resources to facilitate the meaningful incorporation of foreign-born workers into the health sector. Facilitating the incorporation of these workers entails investments in workforce development. It is necessary to give institutional support to broader issues of occupational mobility, quality of work-life and the stewardship role, which foreign-born workers can play to improve the quality of the sector as a whole, especially reducing health disparities of multiple kinds.

3. Foreign-born workers are represented, although unevenly, throughout the entire occupational spectrum of the sector, accounting for over a quarter of the total number of workers in some occupational categories. These occupations show very different educational requirements, renumeration and prospects of mobility. This panorama calls for a differentiated approach to workforce development. "One-size-fits-all" solutions may ignore the fact that workers in different occupations and different life situations require distinct kinds of support and programs to improve their long-term labor market prospects. This call for differentiated workforce development strategies is critical to improving the insertion of new entrants especially in low-wage occupations of the sector such as Nursing Aides.

4. Policy makers in Massachusetts should use the current policy environment as a golden opportunity to craft programs and policies to facilitate and improve the labor market situation of foreign-born workers in the health care sector. At this point in time, several new or ongoing policy initiatives by the current administration of Govenor Deval Patrick will continue the expansion of the health and allied sectors. These include the Life Sciences Initiative, the implementation of Health Care Reform, the Education Readiness Project and universal early childhood and community education. Some of these policies have clear workforce development implications and overt components to address labor supply deficiencies. Special attention should be given to the incorporation of the foreign-born labor force, the fastest growing segment of the state's labor force.

5. In light of the previous two recommendations (differentiated approaches to workforce development and crafting programs into the current policy initiatives), workforce development programs aimed at foreign-born workers will require strong collaborative/coordinating practices from multiple actors. The strength and the sustainability of the "netting" among them will demand forms of institutional governance, which are intersectoral,

multiregional and even international. Workforce development intermediaries with more than local outlooks can be useful organizations in this process.

6. Certification and regulatory requirements for all kinds of health care occupations as well as aging of the workforce and weaknesses in the educational pipeline for selected occupations are all fueling critical shortages. Foreign-born workers can alleviate such shortages. However, workforce development programs must move away from remedial approaches to more comprehensive workforce development approaches. These approaches need to consider supply-side, demand-side and institutional constraints as well as the increasing globalization of health care labor markets.

7. As shown in Section II of this report, there is significant geographic overlap between the concentration of some types of health care facilities (hospital and community clinics) and the growing concentrations of foreign-born workers. This overlap may indicate the need to develop place-based initiatives that interconnect workforce development programs and community development ones, which target overall improvements in the quality of life in nearby communities. Such joint place-based and people-based development programs are likely to help in cost containment, incorporation of a new client base as a result of health care reform and more balanced geographic distribution/integration of health care facilities of different kinds.

8. Qualitative insight into the role that foreign-born workers play in the workplaces of the health care industry (hospitals, community clinics, long-term care facilities, etc.) shows that their contribution extends well beyond providing translation services. Their cultural competence and cross-cultural communications in direct health care delivery and patient management add value to the quality of health care for everyone. In line with that, employers and health care-providing institutions should recognize these contributions by rewarding them as a central element of good performance in human resource management evaluations. It is quite common to see these contributions treated as "informal practices" devoid of professional value. Recognizing these practices will also enhance the ability of the health care system to help alleviate health care disparities.

Sokharith Mey, Physician in Family Practice – Lynn Community Health Center and Father to a 2 1/2 Year Old Son, Alexander.

When Sokharith Mey sat in a room wearing a white coat with fellow residents in Family Medicine on their first day of residency, he couldn't believe it. He had come so far from the frightened little boy who came to the United States in 1981 barely speaking English. His family settled in New York City after years in the United Nation's refugee camps in Thailand and the Philippines. The family had been forced to flee to the camps after Sakharith's father, a physician, was taken away and never heard from again. During the 1970s, the Khmer Rouge systematically killed off the intelligentsia of Cambodia, and his father was apparently one of the victims. Children as young as seven were being separated from families to work on farms. It was truly a brutal and terrible time for Cambodians.

Sokharith's mother struggled to support the six children in the family by selling homemade food but they could not survive. So the family trekked through mine-infested jungles to the United Nation camps in Thailand. Inside the camps, education was provided but "I was at a second grade level and it was my older brother who learned English and to read and write in English. He wrote to the U.S. Embassy for sponsorship to America, and we finally came to New York City in 1981 through a Vietnamese organization. No one in the family spoke English except my brother and he facilitated all of the settlement. We came here with empty hands."

But the family progressed rapidly, especially Sokharith who learned English and graduated from Brandie High School in Manhattan in 1988. He then went on to a program in Radiology and worked in that field for a year before starting college at Brooklyn Health Sciences. At Brooklyn Health Sciences, he completed work to become a Physician's Assistant and worked in Orthopedics for a year to support his family. Then he further climbed the ladder to medical school and started his residency in Family Medicine in 2001.

After residency, he and his wife, Socheata (who he met on a return trip to Cambodia), moved to the Berkshires where he worked in Family Medicine. But the Berkshires were too far away from his brothers and sisters, many of whom had settled in Lowell, MA. An opportunity became available to work at the Lynn Community Health Center where Sokharith has been for the last three years. "I am thrilled to work here and serve the Cambodian community. They appreciate me because many do not speak English and have many problems such as depression, heart issues, high blood pressure and diabetes. This is especially true for the elderly Cambodian population. They do not have English and won't seek help or take their medications. I can reach out to them, sometimes visiting them in the Temple. I give them my cell number to call. They are a vulnerable population but they are also my family. Who can they call when they are sick? They can call me."

APPENDIX I

NATIONAL OVERVIEW AND INTERNATIONAL PERSPECTIVES

Foreign-Born Workers, The Health Care Sector and The Labor Market

Foreign-born Workers and the Health Care Sector at the National Level

According to the Bureau of Labor Statistics, both high- and low-skilled employment within health occupations is projected to grow from 11.5 million in 2002 to over 15 million by 2012. The rate of growth of new jobs in health care occupations is projected to be 30.1 percent while the rate of employment growth projected for non-health occupations is only 13.5 percent (Martiniano, 2004). For 2007, estimates put the health care sector at $2 trillion or 16 percent of GDP (Chong, 2002). The U.S. Bureau of Labor Statistics predicts that between 2002 and 2012 the health care industry will add nearly 3.5 million new jobs, an increase of 30 percent. The health occupations that are expected to grow by the largest number of jobs between 2002 and 2012 are the following: Registered Nurses (623,000); Nursing Aides, Orderlies and Attendants (343,000); Home Health Aides (279,000); Medical Assistants (215,000) and Licensed Practical and Licensed Vocational Nurses (142,000).

Table 1.
National Outlook: Selected Health Care Occupational Projections[17]

Health Care-Related Occupations	2002-2012 Projected Growth	2002 Median Annual Earnings	Postsecondary Education & Training
Registered Nurses	623,000	$ 48,090	Associate Degree
Nursing Aides, Orderlies & Attendants	343,000	$ 19,960	Short-term on-the-job
Home Health Aides	279,000	$ 18,090	Short-term on-the-job
Medical Assistants	215,000	$ 23,940	Moderate on-the-job
Licensed Practical and Vocational Nurses	142,000	$ 31,940	Postsecondary vocational award
Dental Assistants	13,000	$ 27,240	Moderate on-the-job
Medical Records & Health Information Technicians	69,000	$ 23,890	Associate Degree
Dental Hygienists	64,000	$ 55,320	Associate Degree
Pharmacy Technicians	61,000	$ 22,250	Moderate on-the-job
Emergency Medical Technicians & Paramedics	59,000	$ 24,030	Postsecondary vocational award

Source: Table 1 Reproduced from Hutson, 2006.

Although the literature on the growth of the health care industry is vast, little has been written about the role of foreign-born workers in the health care workforce (Lowell & Gerova, 2004). Understanding the role of foreign-born workers within the health care industry is important because since the early 1990s the number of foreign-born workers has increased dramatically. In fact, professional and physician immigration to the United States in the mid-1990s grew at a faster rate than both total immigration and professional employment (Lowell & Gerova, 2004; Stoddard, Sekscenski, & Weiner, 1998).

According to the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor, in 2006, foreign-born workers represented 15.3 percent of the U. S. civilian labor force age 16 and over, up from 14.8 percent in 2005 (BLS, 2007). From early on in the decade, this growth of foreign-born workers in the labor force was felt in the health care sector. In 2000, 1.1 million foreign-born workers were employed in health care occupations in the United States, making up nearly 13 percent of the total health care labor force of 8.9 million (Lowell & Gerova, 2004). In the same year, the majority of foreign-born workers were concentrated in four occupations: Nursing Aides (27 percent), Registered Nurses (22 percent), Physicians (16 percent) and Licensed Practical/Vocational Nurses (5 percent) (Lowell & Gerova, 2004). By 2006, the concentration of foreign-born workers in health care-related occupations remained strong with 4.6 percent of these workers employed in health care practitioner and technical occupations, roughly comparable to 4.9 percent of the native-born population. In the same year, 2.5 percent of the foreign-born workers were employed in health care support occupations relative to 2.1 percent of employed native-born workers. Substantially higher shares of foreign-born women were employed in these two broad occupational groups relative to foreign-born men. When compared to native-born workers (men and women), the share of foreign-born women in these categories is comparable or higher especially in health care support occupations (BLS, 2).

Table 2:
Occupation and Industry of Health Care Workers, 2000

Major Health Care Occupation & History	Percentage of Immigrant Workforce by Region of Birth				Total Number of Workers by Nativity		
	European	Latin American	Asian	Other	Foreign-Born	Native-Born	Percentage of Foreign-Born by Occupation
Health Care Occupation							
Dentist	2.8	1.0	2.9	0.7	21,966	131,274	14.4
Pharmacist	2.2	1.2	5.3	1.5	33,742	180,931	15.7
Physician & Surgeon	15.8	8.2	23.9	8.9	176,458	535,733	24.8
Registered Nurse	20.8	12.9	26.8	22.5	249,986	2,024,991	11.0
Health Diagnosing & Treating, All other	*7.6*	*5.1*	*6.2*	*4.6*	*65,165*	*665,145*	*8.9*
Clinical Technologist & Technician	3.6	2.6	6.7	1.9	48,896	253,681	15.6
Licensed Practical & Vocational Nurse	4.9	4.9	3.0	6.6	52,696	537,174	8.9
Health Technologist & Technician, All Other	*10.2*	*9.3*	*6.8*	*4.9*	*82,499*	*999,305*	*7.6*
Nursing, Psychiatric & Home Health Aides	22.1	37.2	11.8	43.6	305,266	1,495,054	17.0
Medical Assistant & Other Support	4.9	11.2	3.9	3.3	60,086	536,510	10.1
Health Care Support, All Other	*5.1*	*6.5*	*2.7*	*1.4*	*39,113*	*318,992*	*10.9*
Column Total	100.0	100.0	100.0	100.0	1,133,903	7,678,790	12.9
Percentage of Foreign-Born	14.9	19.4	38.5	27.2	100	X	X
Health Care Industry							
Hospital	43.1	40.0	52.3	43.3	677,592	4,675,997	12.7
Nursing Care Facility	10.9	12.4	9.0	18.9	187,553	1,420,637	11.7
Office of Practitioners	25.1	21.3	22.1	11.5	292,502	2,511,079	10.4
Home Health Care Service	7.0	8.9	3.3	12.8	113,420	538,724	17.4
Other Health & Social Service	13.9	17.3	13.3	13.5	213,750	1,609,598	11.7
Column Total	100.0	100.0	100.0	100.0	1,484817	10,756,035	12.1
Percentage of Foreign-Born	15.6	24.0	35.1	25.3	100	X	X

Source: Ruggles et al. (2004), Census Microdata. Adapted from Lowell & Gerova, 2004.

Foreign-born workers within the health care industry are not evenly distributed throughout the occupational structure of the sector. The majority of foreign-born workers are concentrated in either lower-skilled health care occupations such as Home Health Aides or in higher-skilled occupations such as Physicians. When compared to natives, foreign-born workers are 2.2 times more likely to be Physicians but are 16 percent less likely to be Registered Nurses. Moreover, foreign-born workers are 1.3 times as likely to be Clinical Technicians and 1.4 times as likely to be Nursing Aides compared to natives (Lowell & Gerova, 2004). Finally, foreign-born workers are 1.5 times as likely to be employed as Home Health Care Aides compared to natives but 16 percent less likely to be employed in offices of Physicians (Lowell & Gerova, 2004). This is significant because a greater proportion of foreign-born workers are concentrated in lower-paying, lower-skilled occupations with little room for upward job mobility. The reasons for this are not entirely clear, but one can assume that it could be a result of a number of factors including language skills, weak educational background, lack of social networks and discrimination.

The majority of foreign-born health care workers came from Asia (39 percent), Latin America (19 percent) and Europe (15 percent)(see Table 2). In some health care professions it is common to find concentrations of specific ethnic groups. For example, an overwhelming proportion of foreign-born Nurses come from the Philippines. Until the mid-1980s Filipino nurses represented 75 percent of all foreign Nurses in the U.S. workforce and by 2000 their representation declined to 43 percent, still well ahead of the next closest country (Brush, Sochalski, & Berger, 2004). Among Physicians, Indians and Filipinos combined are the largest group represented at 27 percent and Canadian-born physicians are second at 9 percent. Foreign-born workers from Latin America and the Caribbean tend to be underrepresented among the higher-skilled health care occupations but are disproportionately represented among Nursing Aides (Lowell & Gerova, 2004).

Overall, Lowell and Gerova (2004) found that foreign-born health care workers are slightly older (41.9 years) than natives (40.4 years). Perhaps one of the most noticeable differences between the foreign-born health care workforce compared to natives is that foreign-born health care workers are almost twice as likely to work in the central city (50.2 percent) compared to natives (26.4 percent). Only 1.8 percent of the foreign-born health care workers work in facilities outside metropolitan areas compared to 18.4 percent of natives. This appears to be consistent with the current migration patterns of all foreign-born individuals who emigrate to the United States. The majority of foreign-born individuals tend to be geographically concentrated in central cities or "gateway cities" where they tend to have social networks (Chiswick & Miller, 2004). However, this overall pattern of concentration is changing as immigrants are growing fast in newer locations.

As shown in Table 3, foreign-born and native-born workers show similar levels of education in five occupations. For example, the average years of education for Physicians was 19.1 years for foreign-born and natives. Among Registered Nurses, foreign-born workers had an average of 15.7 years of education compared to 15.4 years of education for natives.

Table 3:
Education in Selected Occupations for Foreign-Born and Native-Born Workers

Characteristic of Nativity	Physician & Surgeon	Registered Nurse	Licensed Practical/ Vocational	Nursing, Psychiatric Nurse& Home Health Aide	Health Care Assistant, Aide & Support
Foreign-Born					
Years of Education (average)	19.1	15.7	13.2	11.5	13.7
Native-Born					
Years of Education (average)	19.1	15.4	13.6	11.9	13.2

*Includes only those 25 years of age & older.

Source: Ruggles et al., (2004), Cenus Microdata. Table adapted from Lowell & Gerova, 2004).

Societal Factors, Institutional Forces and Actors Affecting Labor Markets within Health Care

A number of societal factors, institutional forces and actors directly affect the health care labor market. One of the driving forces behind the increase in foreign-born workers has been the shortage of health care workers, especially among Registered Nurses. The U.S. Department of Health and Human Services (DHHS) estimated that the U.S. will face a shortfall of 275,000 Registered Nurses by 2010. By 2020, the need for Registered Nurses will increase to 800,000 (Brush, Sochalski, & Berger, 2004). A number of factors have contributed to this shortage.

According to the American Hospital Association Commission on Workforce for Hospitals and Health Systems (AHA Commission), one of the biggest factors contributing to the labor shortage of health care professionals especially among higher-skilled Nurses, is the aging of the U.S. labor force. The median age of the U.S. labor force increased from 34.8 years in 1978 to 38.7 years by 1998. In 2008, the median age of the U.S. labor force was 40.7 years. This trend is especially prominent in the Nursing profession. The median age of a Registered Nurse in the U.S. in 2000 was 47 years in contrast to 1980 when roughly 53 percent of Registered Nurses were under the age of 40 (DHHS, 2001). As nurses age and eventually retire, many of their positions go unfilled or take a significant amount of time to replace. This ultimately costs hospitals and medical clinics hundreds of thousands of dollars in recruitment fees and administrative costs.

Another factor contributing to the difficulty in filling vacant jobs within the health services sector is the fact that the overall U.S. labor force is growing much more slowly than in past decades precisely at a time when the number of jobs in health care is increasing. The U.S. labor force is expected to grow by only 1 percent between 2000 and 2015, which is significantly less than the 2.6 percent growth between 1970 and 1980.

A third factor contributing to the shortage is the difficulty in retaining health service employees as health careers are perceived to be less attractive than many other careers. A survey administered by the Health Resources and Services Administration (a division of DHHS) found that only 69.5 percent of Registered Nurses reported being satisfied in their current position. This number is significantly lower than in other professions. By comparison, data from the General Social Survey of the National Opinion Research Center indicate that from 1986 through 1996, 85 percent of workers in general and 90 percent of professional workers expressed satisfaction with their jobs (DHHS, 2001).

A fourth factor limiting the growth of new hospital workers is the fact that too many are very stressed by current working conditions that exist in many health facilities including hospitals and nursing homes. This makes it difficult to recruit new employees to the industry and to reduce soaring turnover rates. Moreover, health care professionals face severe risks to their health on the job. Health care workers involved in direct patient care must take precautions to guard against back strain from lifting patients and equipment, exposure to radiation, caustic chemicals and infectious diseases such as HIV/AIDS, tuberculosis and hepatitis (Bureau of Labor Statistics, 2002).

One final factor that is contributing to the shortage of health care workers is the shortage of qualified health care faculty and clinical instructors. This is especially challenging for the nursing profession. According to the American Association of Colleges of Nursing (AACN), U.S. nursing schools turned away 30,709 qualified applicants from baccalaureate and graduate nursing programs in 2007 due to insufficient number of faculty, clinical sites, classroom space, clinical preceptors and budget constraints (AACN, 2007). According to a 2005 ANNC survey, 74 percent of the nursing schools mentioned faculty shortages as a major reason for not accepting more qualified applicants into entry-level nursing programs (AACN, 2005b).

The labor shortage crisis has left the health services industry searching for ways to attract skilled workers. One solution has been to recruit immigrant professional health care workers from other countries including Canada, Ireland, the Philippines and most recently India. This has led to the massive organized international recruitment of nurses and has increased the number of countries that are losing their skilled nurses to the U.S. (Brush, Sochalski, & Berger, 2004). A number of factors are pushing ever increasing numbers of foreign-born Nurses and other health professionals to migrate to the U.S. These factors include not enough health care jobs, low wages, economic instability, poorly funded health care systems and the burdens of deadly diseases in native countries (Aiken et al., 2004).

The increase in the recruitment of foreign-born professionals has led to a cottage industry of for-profit recruiting agencies. Many of these recruiting agencies

Table 4.
Percentage of First-Time Foreign-Trained Registered Nurse (RN) Candidates for U.S. Licensure Examination by Top Six Exporting Countries, 1997-2001

	1997	1998	1999	2000	2001
Total Number of Foreign-Born Candidates	*6,574*	*6,045*	*6,381*	*7,506*	*8,613*
Philippines	26%	27%	29%	44%	52%
Canada	29%	26%	21%	15%	12%
Korea	4%	6%	11%	8%	6%
India	7%	6%	6%	6%	4.5%
United Kingdom	5%	5%	4%	4%	3%
Nigeria	5%	4%	4%	3%	2%

Source: Reproduced from Brush, Sochalski, & Berger, 2004.

work closely with hospitals and other health care facilities to recruit skilled health care professionals to the U.S. This strategy is time consuming (it can take up to six months) and can also be expensive. However, agencies that are in the business of recruiting health care professionals from abroad, especially Nurses, have proved to be quite profitable. Since 1998 the number of foreign-trained Nurses (most of whom are foreign-born) entering the U.S. nursing workforce has increased at a rate faster than that of U.S. educated new Nurses (Aiken et al., 2004).

In addition to nurses, there has also been a steady supply of foreign-trained international medical graduates, most of whom are foreign-born (Cooper, 2005). One of the major factors contributing to the steady flow of foreign-trained, international medical graduates in the mid-to-late 1990s was the change in immigration policy that expanded the availability of H-1b visas for foreign-trained Physicians. H-1b visas had previously been limited to Physicians who were researchers, but after the change in law, all foreign-trained Physicians were eligible for an H-1b visa for up to five years (Cooper, 2005). Previously, the average number of foreign-trained international medical graduates was 4,300 but rose to almost 5,000 annually by 1999 (Cooper, 2005).

APPENDIX II
METHODOLOGY

Methodology

This report benefited from both the individual and collective effort and expertise of various researchers. Distinct research strategies were used in addressing specific issues regarding the role of foreign-born workers in the health care sector. The report relies on both primary and secondary qualitative and quantitative data.

Overall, four major research strategies were used. First, a comprehensive review of the literature served to identify the critical issues affecting foreign-born workers in the health care sector at various levels of statistical and geographic aggregation. The available literature on foreign-born workers in the health care sector of the U.S. at any geographic level and on any topic is not abundant. Thus, to some extent, the review reflects the scope of available information and academic material. That said, the review paid special attention to six issues:

1. Demographic and occupational characteristics of foreign-born workers;
2. recruitment practices to attract and hire foreign-born workers;
3. supply-side and demand-side labor market conditions affecting the employment prospects of foreign-born workers in the sector (economic globalization, growth of health care sector employment, vacancy rates, shortages, types of establishments employing workers, spatial concentration of health facilities, etc.);
4. obstacles to employment and to occupational mobility that foreign-born workers confront in the health care labor market;
5. workforce development programs for foreign-born workers in the health care sector;
6. the importance of foreign-born workers in reducing health disparities and improving health care quality through diversity and cultural competence.

A second methodological strategy was to search and analyze a broad range of sources of quantitative data. These data sources were used especially in Sections II and Appendix I of this report, largely to characterize supply and demand side dynamics of the health care sector and its labor market:

1. U.S. Bureau of the Census: 2000 Public Use Microdata Sample (PUMS) of the U.S. Census; 2005 American Community Survey;
2. Bureau of Labor Statistics, U.S. Department of Labor;
3. Massachusetts Department of Workforce Development: Job Vacancy Survey; Occupational Employment and Wage Industry Staffing Patterns;
4. Tabulations elaborated by the Commonwealth Corporation based on the Massachusetts Job Vacancy Survey.

To use some of these sources required special tabulations and procedures especially to estimate the shares of foreign-born workers in health care-related occupations. Some 41 occupational categories in the health care occupational group from the Standard Occupational Classification (SOC) system were chosen for analysis. The occupational categories chosen for analysis are mainly compatible with those used in most of the literature on the occupational situation of foreign-born workers in the health care sector (Lowell & Gerova, 2004). The tables in Section II report the shares of foreign-born workers in each occupational category as a weighted average in order to compensate for small sample sizes. We have been careful not to over-generalize about percentage shares in occupational categories (Tables 3, 4, 5) with fewer than ten observations per category. In Section II, data on health care employment by type of establishment are compatible with the North Atlantic Industry Classification System (NAICS).

A third research strategy was to interview key stakeholders and staff in several positions and establishments of the state's health care industry. This information was

particularly important in Section III. These interviews were often recorded and transcribed or detailed notes were taken. All interviews are referenced in a separate section of the bibliography. This qualitative data was used to document:

1. The importance of foreign-workers in reducing health disparities;

2. the stewardship functions that foreign-born workers perform in health care environments especially improving health care quality through culturally sensitive practices;

3. the importance of cultural competence in the health care quality-diversity nexus;

4. awareness among health care industry managers and administrators of the growing concentrations of foreign-born workers in the sector and in some particular occupations;

5. promising practices in workforce development to improve job prospects and mobility of foreign-born workers in the health care sector of Massachusetts.

The fourth research strategy consisted of developing criteria to select the small case studies of workforce development programs with promising practices, which may improve the labor market situation of foreign-born workers in the health care sector. These small cases are the core of Section IV. In order to determine the universe of sites that may have promising practices in workforce development, we identified four sets of criteria that programs had to show:

1. An explicit intention to increase job opportunities for foreign-born workers in the health care industry;

2. evidence of interventions intended to increase the readiness of foreign-born workers to enter and stay in jobs in the health care sector;

3. evidence of promoting career advancement for foreign-born workers including recruitment, retention and promotion initiatives;

4. evidence that organizational practices are culturally appropriate and sensitive to foreign-born workers.

Once we narrowed the universe of possible programs, we selected the most promising programs operating in Massachusetts and developed two lenses for viewing, identifying, categorizing and narrowing the criteria for case study selection: a strategy lens and a driver lens. Through the strategy lens, we identified four goals upon which programs may focus their efforts:

1. Increase the supply of health care workers by providing education and/or certification services at any level of education or employment positions;

2. increase vocational movement within the health care industry including horizontal and vertical job growth opportunities as well as increased involvement in active patient care;

3. provide culturally competent care to patients by recruiting and retaining foreign-born workers;

4. provide English language classes or other basic training for foreign-born workers.

The driver lens enabled us to identify how the programs we examined were initiated, operated and/or funded. Using the driver lens, we identified five possible modes of operation:

1. industry programs initiated or operated by actors within the health care industry;

2. higher education programs initiated or operated by traditional education entities;

3. government-funded/higher-education-executed programs funded by a government grant and executed by an institution of higher education;

4. public/community organization programs initiated or operated by a public or nongovernmental grassroots agency;

5. integrated programs initiated or operated by a coalition of providers from different sectors or by different types of entities within the sector.

We also reviewed the available literature, particularly program surveys and case studies, related to the issue of foreign-born workers and the health care economy. Finally, we reached out to expert practitioners in the field and relevant policy experts to get their advice and feedback on the programs we were considering as well as any other insights they had.

The result was the following set of three programs and the "lenses" we used to identify each of the selected programs.

Table 1:
Programs Selected for Case Studies

Program	Driver	Strategy
The Boston Welcome Back Center	Higher Education	Increase Supply
Northern Essex Community College Learning Enrichment Group	Higher Education	Increase Supply
Boston Health Care Research & Training Institute	Industry	Increase Vocational Movement
Jamaica Plain Neighborhood Developement Corporation	Public/Community Organization	English Language classes & other foreign-born workers

APPENDIX III

SUMMARY OF WORKFORCE DEVELOPMENT PROGRAMS

Promising Practices

Summary of Workforce Development Programs with Promising Practices

Program Name:	**Bunker Hill Community College: The Welcome Back Center**
Program Summary:	The Boston Welcome Back Center's objective is to welcome back nurses from around the world to the nursing profession here in Massachusetts. It assists people who were nurses in other countries become registered nurses in Massachusetts. The process can be complicated and involves working with several different agencies, filling out forms and sometimes meeting additional educational requirements. It assists individuals with developing a career path plan that builds on each nurse's strengths, skills, experience and education. Individualized Case Management support may include assistance with the Massachusetts licensure process, Commission on Graduates of Foreign Nursing Schools (CGFNS), Professional Credential Services Inc. (PCS), educational support, English language classes, volunteer opportunities and a variety of groups at the Center.
Type of Health Care Setting:	Educational setting – training/coaching to enter the Massachusetts/U.S. nursing profession
Types of Job Roles:	Nurses
Location:	Urban
Partnership Models:	An educational consortium consisting of Bunker Hill Community College, MassBay Community College, Roxbury Community College, UMass Boston and the Massachusetts Board of Higher Education.
What makes this program relevant to the broader report context:	Focused on easing the way for internationally-trained, foreign-born nurses to enter the Massachusetts health care economy.
Program Information Resources:	http://www.bhcc.mass.edu/inside/18

Summary of Workforce Development Programs with Promising Practices

Program Name:	**Northern Essex Community College's Learning Enrichment Group Program (LEG): A Nursing Education Initiative of the Massachusetts Board of Public Higher Education (BHE).**
Program Summary:	The twin goals of the Board of Higher Education's Nursing Education Initiative are to address the near-term shortages of nursing graduates and to develop longer-term programs to increase the capacity of public higher education to meet the demand for nurses. This requires that BHE address the shortages in the supply of faculty, the number and quality of clinical placement sites and laboratory facilities. In 2003, there were 7,000 unfilled nursing positions. The Massachusetts Hospital Association projects the shortage to reach nearly 10,000 nurses by 2010 and to surpass 25,000 by the year 2020. Paradoxically, although there is a shortage of nurses, there is not a shortage of nursing students. Qualified students are waiting in line to get into Massachusetts public and private higher education nursing programs. However, there are too few faculty, too few clinical sites and too many inadequate laboratory facilities to meet this student and workforce demand. The lists of program funding priorities supported by the Nursing Initiative defines how LEG has been working to meet these challenges. The BHE Nursing Initiative alone will not solve the problem. If the major barriers causing the nursing crisis are to be overcome, partnerships among higher education, hospitals, health care associations and businesses must be strengthened and new ones developed. Innovation and investment in the delivery of nursing education such as LEG must be encouraged and supported.
Type of Health Care Setting:	Education and retention programs in state colleges
Types of Job Roles:	Nurses
Location:	Community colleges across the state
Partnership Models:	Identifying best practices from the Nursing Career Ladder Initiative and assessing the results of the BHE analysis of health care industry and public higher education partnerships. The BHE has been working with the Massachusetts Hospital Association and other health care stakeholders to develop the Massachusetts Public Higher Education Initiative on Nursing Education.
What makes this program relevant to the broader report context:	Focuses on nursing faculty shortage – link to foreign-born unclear at this point.
Program Information Resources:	http://www.mass.edu/p_p/home.asp?id=9&iid=9.0

Summary of Workforce Development Programs with Promising Practices

Program Name:	**Boston Health Care Research and Training Institute/Jamaica Plain Neighborhood Development Corporation.**
Program Summary:	The Boston Health Care and Research Training Institute is a major collaboration to help entry-level workers and neighborhood residents pursue successful careers in Boston's health care industry. Through the Training Institute, which the JPNDC leads together with the Fenway CDC, hundreds of adults from Jamaica Plain, Fenway, Mission Hill and other Boston neighborhoods are accessing the education, skills training, career coaching and other services they need in order to obtain well-paid positions in health care. Some of the courses that current entry-level workers can take on-site, free of charge, and often with full or partial release time from their employers include: • English language classes • High School Equivalency exam preparations (GED) • patient care (leading to state exam for Certified Nursing Assistants) • pre-college math and science • introduction to medical technology careers and prerequisite courses. Neighborhood residents who want to get started in the health care field can take pre-employment trainings focusing on specific areas including patient care, science and technology, medical administration and English language classes.
Type of Health Care Setting:	Training Center
Types of Job Roles:	Training for Certified Nursing Assistant, pre-nursing school preparation
Location:	Urban, Boston (Jamaica Plain and Fenway)
Partnership Models:	IThe employer partners together represent 35 percent of health care and research employment in Boston. They include Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Children's Hospital Boston, Dana-Farber Cancer Institute, Fenway Community Health Center, Harvard Medical School and Harvard School of Dental Medicine, Joslin Diabetes Center, Martha Eliot Health Center, New England Baptist Hospital, Southern Jamaica Plain Health Center and Spaulding Rehabilitation Hospital.
What makes this program relevant to the broader report context:	Targets entry-level workers from inner-city Boston to be trained for jobs in the health care sector.
Program Information Resources:	http://www.jpndc.org/workforce/boston_hcrti.html

APPENDIX IV

KEY INFORMANTS

Key Informants

1. Ming Ronquillo, Nurse Manager, 5 & 6 West, Hebrew Rehabilitation Center, W. Roxbury

2. Dorcas Grigg-Saito, Executive Director of the Lowell Community Health Center

3. Bob Ingala, Executive Director of the Greater Lawrence Family Health Center and member of the Health Disparities Council of Massachusetts

4. Donna Rivera, Director of Community Support Services at the Greater Lawrence Family Health Center and Merrimack Valley Area Health Education Center

5. Dean Cleghorn, Director of Excellence for Eliminating Disparities, Greater Lawrence Family Health Center

6. Debbie Hilton-Creek, Chief Human Resources Officer, at the Greater Lawrence Family Health Center

7. C. W., Nurse Manager (This interviewee preferred to remain anonymous.)

8. Nancy Pettinelli, Executive Director of the Visiting Nurse Association of Greater Lowell

9. Linda Cragin, Area Health Education Council

Footnotes

1. The Boston Foundation: http://www.tbf.org/IndicatorsProject/Health/Default.aspx
2. Medical Academic and Scientific Community Organization, Inc (MASCO): http://www.masco.org/pdf/stateofthelma_report.pdf
3. Ibid: http://www.masco.org/pdf/stateofthelma_report.pdf.
4. Interview with Donna Rivera, Community Support Services Director of the Greater Lawrence Family Health Center and Merrimack Valley Area Health Education Center.
5. Interview with Dorcas Grigg-Saito, Executive Director of the Lowell Community Health Center
6. Interview with Dorcas Grigg-Saito.
7. Interview with Dean Cleghorn, Director of Excellence for Reducing Disparities, Greater Lawrence Family Health Center.
8. Interview with Dean Cleghorn.
9. Interview with Dorcas Grigg-Saito.
10. Interview with Debbie Hilton-Creek, Chief Human Resources Officer, Greater Lawrence Family Health Center.
11. Interview with Normita Ronquillo, Nurse Manager, Hebrew Rehabilitation Center, West Roxbury.
12. Interview with Normita Ronquillo.
13. Interview with Normita Ronquillo.
14. Interview with Donna Rivera.
15. Bunker Hill Community College, 2006. http://www.bhcc.mass.edu/inside/18
16. Ibid 17.
17. Chong, 2002, p. 3.

References

AACN [American Association of Colleges of Nursing]. (2005a). Faculty shortages in baccalaureate and graduate nursing programs: Scope of the problem and strategies for expanding supply. Washington, DC.

AACN [American Association of Colleges of Nursing]. (2005b). Nursing shortage fact sheet. http://www.aacn.nche.edu/Media/FactSheets/NursingShortage.htm

AACN [American Association of Colleges of Nursing]. (2007). Enrollment growth slows at U.S nursing colleges and universities in 2007. Press release. Available on-line at http://www.aacn.nche.edu/Media/NewsReleases/2007/enrl.htm

Ahmad, O. B. (2005). Managing medical migration from poor countries. BMJ, 331, 43-45.

Aiken, L. H. (2006, February 8). U.S. policies: Key to global nurse sufficiency. Presentation to the Academy of Health's Migration and the Global Shortage of Health Professionals Health Policy Forum, Washington, DC

Aiken, L. H., Buchan, J., Sochalski, J., Nichols, B., & Powell. M. (2004). Trends In international nurse migration. Health Affairs, 23(3), 69-77.

Bartik, T., & Erickcek, G. (2007). Higher education, the health care industry and metropolitan regional economic development: What can "eds and meds" do for the economic fortunes of a metro area's residents? Paper Presented at the Conference on Urban and Regional Policy and Its Effects, March 29-30, 2007. Washington, DC: George Washington University Institute for Public Policy.

Beach, M. C., et al. (2005). Cultural competence: A systematic review of health care provider educational interventions. Medical Care, 43(4), 356-373.

Betancourt, J. R., Green, A. R., Carrillo, J. E., & Ananeh-Firempong II, O. (2003). Defining cultural competence: A practical framework for addressing racial/ethnic disparities in health and health care. Public Health Reports, 118(4), 293-302.

BLS [Bureau of Labor Statistics, U.S. Department of Labor]. (2002). Occupational Outlook Handbook 2002-2003. Washington, DC.

BLS [Bureau of Labor Statistics, U.S. Department of Labor]. (2007). Foreign-born workers: Labor force characteristics in 2006. Washington, DC.

Boston Redevelopment Authority. (2001). Health and medical services fact sheet.

Brush, B. L., Sochalski, J., & Berger, A. M. (2004). Imported care: Recruiting foreign nurses to U.S. health care facilities. Health Affairs, 23(3), 78-87.

References

Buerhaus, P. I., Staiger, D. O., & Auerbach, D. I. (2003). Is the current shortage of hospital nurses ending? Health Affairs, 22(6), 191-198.

Bureau of the Census, U.S. Dept. of Commerce. (1996). Population projections of the U.S. by age, sex, race, and Hispanic origin: 1995 to 2050. Current Population Reports No. P25-1130.

Chiswick, B., & Miller, P. (2004). Where immigrants settle in the United States. Discussion Paper No. 1231. Bonn, Germany: Institute for the Study of Labor.

Chong, N. (2002). A model for the nation's health care industry: Kaiser Permanente's Institute for Culturally Competent Care. The Permanente Journal, 6(3), 1-15.

Commonwealth Corporation. (2007a). Massachusetts health care chartbook. Boston, MA.

Cooper, L. A., & Powe, N. R. (2004). Disparities in patient experiences, health care processes, and outcomes: The role of patient-provider racial, ethnic, and language concordance. New York: The Commonwealth Fund.

Cooper, R. A. (2005). Physician Migration: A challenge for America, a challenge for the world. The Journal of Continuing Education in the Health Professions, 25(1), 8-14.

Corey-Lisle, P., Tarzian, A. J., Cohen M. Z., & Trinkoff, A. M. (1999). Health care reform: Its effects on nurses. Journal of Nursing Administration, 29(3): 30-37.

Davis, C. R., & Nichols, B. L. (2002). Foreign-educated nurses and the changing U.S. nursing workforce. Nursing Administration Quarterly, 26(2), 43-51.

DeVol, R., & Koepp, R. (2003). The economic contributions of the health care industry to the New England region. New England Health Care Institute. Boston, MA.

DHHS [U.S. Department of Health & Human Services]. (2000). Healthy People 2010. Washington, DC.

DHHS [U.S. Department of Health and Human Services]. (2001). The registered nurse population: Findings from the National Sample Survey of Registered Nurses.

Giger, J., Davidhizar, R. E., Purnell, L., Harden, J. T., Phillips, J., & Strickland, O. (2007). American Academy of Nursing Expert Panel report: Developing cultural competence to eliminate health disparities in ethnic minorities and other vulnerable populations. Journal of Transcultural Nursing, 18(2), 95-102.

Glaessel-Brown, E. E. (1998). Use of immigration policy to manage nursing shortages. Journal of Nursing Scholarship, 30(4), 323-327.

References

Harkavy, I., & Zuckerman, H. (1999). Eds and meds: Cities' hidden assets. Washington, DC: Center on Urban and Metropolitan Policy, The Brookings Institution.

Hassmiller, S. B., & Cozine, M. (2006). Addressing the nurse shortage to improve the quality of patient care. Health Affairs, 25(1), 268-274.

Hebert, S., Siegel, B., Minzner, A., Winey, D., & Schneider, G. (2007, June). SkillWorks Initiative, year end report – Year 3. Cambridge, MA: Abt Associates.

Holzer, H. J., & Waller, M. (2003). The Workforce Investment Act: Reauthorization to address the "skills gap." Washington, DC: The Brookings Institution.

HRSA [Health Resources and Services Administration, U.S. Department of Health & Human Services]. (2002). Projected supply, demand, and shortage of registered nurses: 2000-2020. Washington, DC.

HRSA [Health Resources and Services Administration, U.S. Department of Health & Human Services]. (2004, February). Nursing aides, home health aides, and related care occupations: National and local workforce shortages and associated data needs. Washington, DC.

Hutson, M. A. (2006). "Politics, jobs and workforce development: The role of workforce development intermediaries in building career pathways within Boston's health care industry." Dissertation, Department of Urban Studies and Planning, MIT.

IOM [Institute of Medicine]. (2003). Unequal treatment: Confronting racial and ethnic disparities in health. B. D. Smedley, A. Y. Stith, & A. R. Nelson (Eds.), Washington, DC. The National Academy Press.

IOM [Institute of Medicine]. (2004). In the nation's compelling interest: Ensuring diversity in the health-care workforce. B. D. Smedley, A. S. Butler, L. R. Bristow (Eds.). Washington, DC: The National Academy Press.

Kingma, M. (2001). Nursing migration: Global treasure hunt or disaster-in-the-making? Nursing Inquiry, 8(4): 205-212.

Koehn, P. H. (2006). Health-care outcomes in ethnoculturally discordant medical encounters: The role of physician transnational competence in consultation with asylum seekers. Journal of Immigrant and Minority Health, 8, 137- 147.

Krasner, J. (2007, November 9). Home health assistants vote to join union. Boston Globe. Retrieved December 28, 2007, from:http://www.boston.com/business/healthcare/articles/2007/11/09/home_health_assistants_vote_to_join_union/

References

Lemay, K., & Messier, D. (2005, June 16). Growing your own nurses: Building a culture of learning through effective partnerships, educational programs and career counseling. Extended Care Career Ladder Initiative Case Study.

Leohardt, David. (2002, December 30). Northeast quietly becomes a health care corridor. New York Times.

Lowell, B. L., & Gerova, S. G. (2004). "Immigrants and the health care workforce." Work and Occupations, 31(4), 474-498.

Martineau, T., Decker, K., & Bundred, P. (2002). Briefing note on international migration of health professionals: Leveling the playing field for developing country health systems. Liverpool School of Tropical Medicine. www.liv.ac.uk/lstm/hsrhome.html

Martiniano, R. et al. (2004). Health care employment projections: An analysis of Bureau of Labor Statistics occupational projections, 2002-2012. Rensselaer, NY: Center for Health Workforce Studies, University of Albany School of Public Health.

Massachusetts Division of Employment and Training. (2003, February). Assessing the SDA Economies, 1990-2000. Available on-line at http://lmi2.detma.org/Lmi/pdf/2059B_0203.pdf

Mullins, C. D., Blatt, L., Gbarayor, C. M., Yang, H.-W. K., & Baquet, C. (2005). Health disparities: A barrier to high-quality care. American Journal of Health-System Pharmacy, 62, 1873-1882.

Narasimhan, V., Brown, H., Pablos-Mendez, A., et al. (2004). Responding to the global human resources crisis. The Lancet, 373, 1469-1472.

Nevidjon, B., & Erickson, J. I. (2001, January 31). The nursing shortage: Solutions for the short and long term. Online Journal of Nursing, 6(1), 1-17.

Newell-Withrow, C., & Siusher, I. L. (2001). Diversity: An answer to the nursing shortage. Nursing Outlook, 49, 270-71.

Office of Minority Health, U.S. Department of Health and Human Services. (2001, March). National standards for culturally and linguistically appropriate services (CLAS) in health care: Final report. Available on-line at http://www.omhrc.gov/assets/pdf/checked/finalreport.pdf.

Paral, R. (2004). Health workers shortages and the potential of immigration policy. Immigration Policy in Focus, 3(1).

Prince, H. (2006, May). Creating careers, improving care: A win-win economic advancement strategy for certified nursing assistants in long-term care. Boston, MA: Jobs for the Future.

References

Scott, M. L., Whelan, A., Dewdney, J., & Zwi, A. B. (2004). "Brain drain" or ethical recruitment? Solving health workforce shortages with professionals from developing countries. Global Health, 180, 174-176.

SEIU [Service Employees International Union]. (2006, August 22). New alliance unites caregivers and hospital management. Retrieved December 28, 2007 from http://www.1199seiu.org/media/press.cfm?PR_ID=1322.

Shindul-Rothschild, J., Berry, D., & Long-Middleton, E. (1997). Where have all the nurses gone? Final results of our patient care survey. American Journal of Nursing, 96(11), 25-39.

Silverston, N., & Rubin, J. (2006, Spring). "An innovative approach to developing entry-level workers." Insights, 33-35.

Stoddard, J., Sekscenski, E., & Weiner, J. (1998). The physician workforce: Broadening the search for solutions. Health Affairs, 17(1), 252-257.

Stone, R. I., & Wiener, J. M. (2001). Who will care for us? Addressing the long-term care workforce crises. The Urban Institute and the American Association of Homes and Services for the Aging.

Sullivan Commission. (2004). Missing persons: Minorities in the health professions. A report of the Sullivan Commission on Diversity in the Workforce. Available on-line at http://www.aacn.nche.edu/Media/pdf/SullivanReport.pdf

Unruh, L. Y., & Fottler, M. D. (2005). Projections and trends in the RN supply: What do they tell us about the nursing shortage? Policy, Politics and Nursing Practice, 6(3), 171-182.

Wilson, R. (2006, May). Invisible no longer: Advancing the entry-level workforce in health care. Boston, MA: Jobs for the Future.

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