HOW SOUTHWEST FLORIDA PREPARES FOR ITS 2050 HEALTH CARE

WORKFORCE BY IDENTIFYING AND CREATING EDUCATIONAL PROGRAMS:

NEEDS, DEMAND, AND STRATEGY

BY

Lynda M. Waterhouse

A doctoral project submitted to the faculty of the Medical University of South Carolina
in partial fulfillment of the requirements for the degree
Doctor of Health Administration
in the College of Health Professions

i

HOW SOUTHWEST FLORIDA PREPARES FOR ITS 2050 HEALTH CARE

WORKFORCE BY IDENTIFYING AND CREATING EDUCATIONAL PROGRAMS:

NEEDS, DEMAND, AND STRATEGY

Abstract of Doctoral Project Presented to the
Executive Doctoral Program Health Administration & Leadership
Medical University of South Carolina
In Partial Fulfillment of the Requirements for the
Degree of Doctor of Health Administration

HOW SOUTHWEST FLORIDA PREPARES FOR ITS 2050 HEALTH CARE

WORKFORCE BY IDENTIFYING AND CREATING EDUCATIONAL PROGRAMS:

NEEDS, DEMAND, AND STRATEGY

By

Lynda M. Waterhouse

Chairperson: Kit H. Simpson, DrPH
Committee: Jami L. Jones, MHA, Ph.D.
Committee: Angela R. Mund, D.N.P.

There is a concern about having enough healthcare providers in the next 30 years

due to changing demographics and rapid population growth in Southwest Florida. The

study objective is to determine the health care needs of Southwest Florida and the type of

health care providers required, and then how to best provide educational programs to

ensure there are the professionals in future years to meet the needs. The research will

explore how the educational system as a critical component in the preparation of the

region's workforce can proactively address the anticipated programmatic gaps in

achieving the projected needs of the community. Health care and education nationally

and within the state of Florida are evolving and moving in new directions. It is important

to explore how education and health care needs will intersect to meet the needs of a

future population. The study is focused on Southwest Florida; however, the research

addresses the national economic trends of health care since the migration of workers from

state to state influences the local economy.

TABLE OF CONTENTS

List of Tables

List of Figures

CHAPTER I
INTRODUCTION

This project examines the changing needs of the health care workforce projected

out for the next thirty years. The research will explore how the educational system as a

critical component in the preparation of its workforce can proactively address the

anticipated programmatic gaps in achieving the projected needs of the community.

Health care and education nationally and within the state of Florida are evolving and

moving in new directions. It is important to explore how education and health care needs

will intersect to meet the needs of a future population. The study is focused on

Southwest Florida; however, the research addresses the national economic trends of

health care since the migration of workers from state to state influences the local

economy.

Background

National Healthcare Trends

As slow as change can be in health care, there are numerous leading indicators

that health care is shifting in a new direction. Factors like the way care is delivered, how

care is reimbursed, and an increased focus on cost containment is driving change in

healthcare. Patients have numerous options for the delivery of care outside of the typical

doctor office or hospital visit. Now patients can visit their local drug store and receive

some of their essential primary care or have a tele-visit with a provider who diagnoses

and treats a patient from a distance. Reimbursement is shifting from the long-standing

fee-for-service that focused on volume to a reimbursement system that considers the

patient the center of care and rewards value over volume. The health care sector as a

percent of Gross Domestic Product (GDP) increased 3.9 percent in 2017 to $3.5 trillion,

17.9% of GDP (Centers for Medicare and Medicaid [CMS], 2017). Economists are

predicting that annual growth will be 5.5% and outpace the overall economy reaching

20% of GDP by 2026 (Commins, 2018). Although the fact that the rapid increase in

health care spending has been a concern for many years, current attention is focused on

cost containment in health care spending which contributes to the changes in how care is

delivered and reimbursed. Long-standing shortages of primary care physicians, nurses,

allied health professionals, and pharmacists are predicted to increase in coming years

("Tomorrow's health care," 2014).

National Education Trends

Education is also experiencing its own evolution. Experts believe the education

system is not able to respond effectively to workforce needs and curricula are not

adequately preparing students for the health care environment of the future ("Tomorrow's

health care," 2014). The younger generations have a different outlook on their

educational journey. They questioned the value they receive from their tuition dollars

and want to receive immediate gratification from their education. In a survey of

Millennials conducted by Prudential, 70% of the respondents believe the high cost of

traditional four-year education will drive students to choose online education or

apprenticeships in the coming decades. They believe work and education will progress in

tandem and be a process of life-long learning (Prudential, n.d.).

Geographic Focus of This Study

Definitions of Southwest Florida vary by agencies but primarily consist of Collier, Lee, Charlotte, Hendry, Glades, and Monroe Counties. The two counties of Lee and Collier are the focus of the study. As depicted in Figure 1, Collier County is the largest by land area (1,998 square miles) in the state of Florida and encompasses the Metropolitan Statistical Area (MSA) Naples-Immokalee-Marco Island with a population in 2016 of 365,136 persons. The largest MSA by population in Southwest Florida is Cape Coral-Fort Myers located in Lee County with a population of 722,336 in 2016 (Data USA, n.d.).
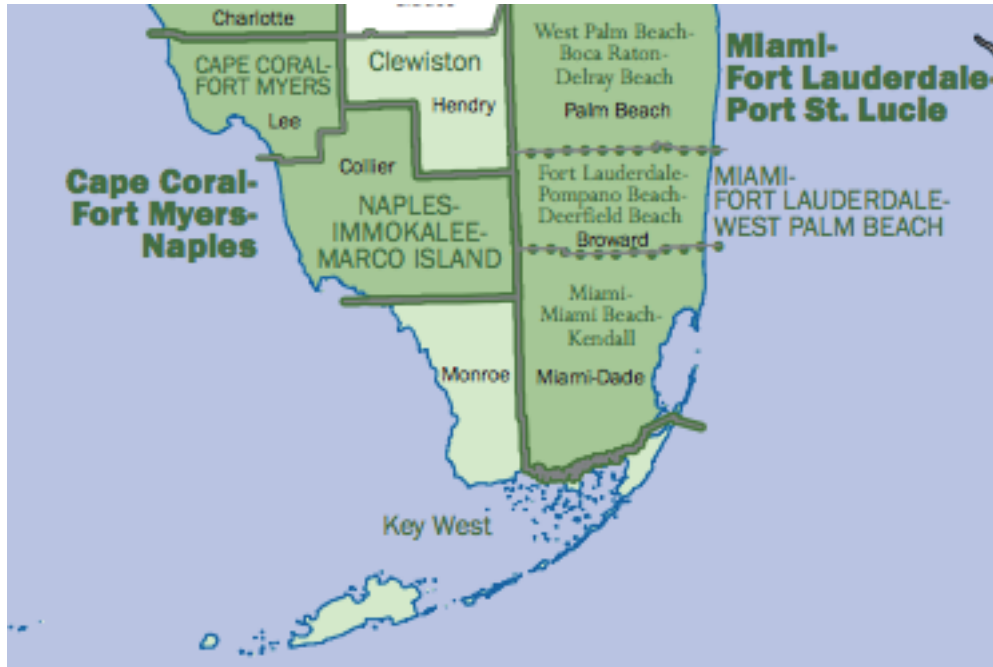
Figure 1. Map of Southwest Florida

Source:

https://www2.census.gov/geo/maps/metroarea/stcbsa_pg/Feb2013/cbsa2013_FL.pdf

The demographics of the nation are changing, and the current and future population has needs and demands different than generations of the past. The baby boomer population is increasing by 10,000 individuals per day, and the health care

system will have to respond to health conditions such as to depression, anxiety disorders, and substance abuse in addition to cancer, and dementia (Reno, 2016).

On the other hand, the generation of Millennials has a different vision of healthcare and is seeking a more holistic, preventative approach to healthcare. Millennials are pro-active versus reactive in adopting wearables, personalized medicine, genomic testing, and digital health coaches. They are focusing on their mental and emotional well-being and are more knowledgeable about their own health. They expect that health care providers will utilize technology to predict and treat their health care needs (Prudential, n.d.). This shift does not necessarily equate to lower health care spending because among others the following factors: the projected longer lives of healthier people and disease survivors, the impact of high cost of investment in technology such as artificial intelligence (AI) or robotics, and the need to find solutions for security and privacy of personal data as a result of advances in technology.

Economic Forecasts of the Area Projected to 2050

Economic forecasts allow for the planning of future demand. Regarding this study, it is essential to understand the anticipated workforce needs not only for the foreseeable future but what to anticipate many years forward. Key health care professionals can take years to be workforce ready. So as the health care workforce needs shift, an integral part of the analysis is to be as forward-thinking as data allow. Significant trends reviewed in this study are the projected Total Population by Age Group, Total Population by Ethnicity-Race, Number of Households with Money Income, Earnings by Industry Sector, and Number of Jobs by Industry Sector for Collier and Lee Counties out to 2050.

Need for the Current Study

The purpose of the study is to create a report to the community to assess potential educational program gaps to prepare the health care workforce to meet the growing needs of Collier and Lee counties through 2050. The educational system is key to creating a pipeline of talent to fill the anticipated voids of health care professionals. Each state and county in the country will have different needs, and thus it is vital to understand the needs of the immediate area in context with trends of the country as a whole. For example, one state may have a surplus in certain professions, yet the immediate area may have a shortage. Illinois is predicted to have an excess of 27,000 Registered Nurses (RNs) by 2025 because of their strong educational pipeline and the departure of the general population to other states, yet Texas is not able to keep up with demand and is predicted to have a shortage of 27,000 RNs. Figure 2 shows anticipated RN workforce shortages and surpluses within each state by 2025 (Stevenson, 2018). Because Florida is expected to have continued high growth in the coming years, the migration of workers from other states with surpluses such as Illinois will influence the need to educate more RNs and other health care professionals in Florida.
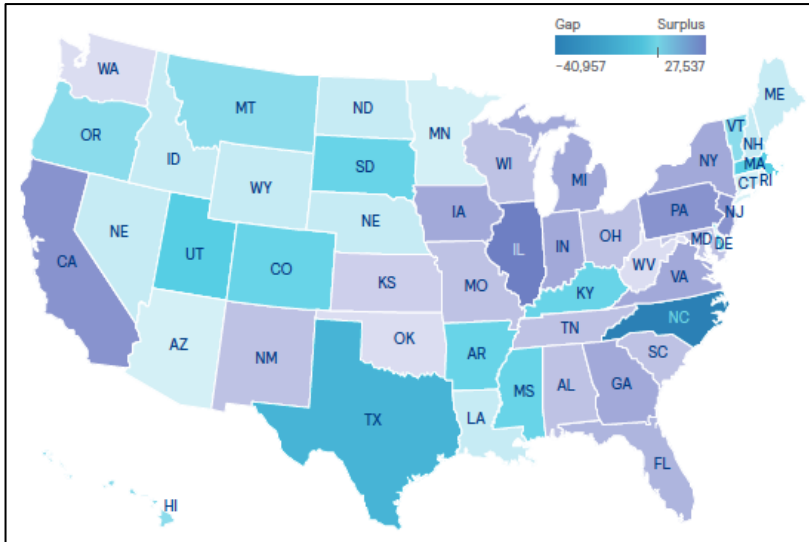
Figure 2. Nurse Gap and Surplus by State

Source: Mercer's US Healthcare External Labor Market Analysis (2017). Calculations

by Mercer's Workforce Strategy and Analytics practice.

Demographics Overview

As mentioned above, the estimated annual population in 2016 for Collier

County was 365,136 residents. Collier County's population growth at 12.9% outpaced

the population growth of the state of Florida by 3.7% between the years 2010 and 2016

(Q-Q Research Consultants [Q-Q Research], 2018). Collier County has an older median

age at 49.2 years, whereas the state of Florida has a median age of 41.6 years. It is

expected that the most significant population growth by 2030 will be in the 65-plus age

group. This age group is estimated to move from 26.4% of the population in 2010 to

32.5% in 2030. As the 65-plus age group is increasing, the under 18-age group is

decreasing, making that age group the smallest in the state of Florida (Q-Q Research,

2018).

Population growth for Lee County between 2000 and 2010 increased by 177,865

persons or 40.3%, whereas the state of Florida increased by 17.6%. Both Collier and Lee

counties outpaced the growth of the state. The median age in Lee County is 46.9, and

although a younger median age than Collier County at 49.2, it is still older than the

median age of the state at 41.6 years (Professional Research Consultants, Inc. [PRC],

2017).

The change in demographics and the change in the delivery of health care are

resulting in new job opportunities and creating a surge in demand for health

professionals. Moreover, there are unmet needs and shortages in healthcare occupations

such as nursing. The aging population is placing a strain on an already compromised

healthcare system with 10,000 baby boomers turning sixty-five every day (Pianin, 2017).

Also, some of the major themes that will influence the occupational opportunities moving

forward in health care are cost containment, the changing regulatory environment, value

over volume, rise of retail and consumerism, and technology development (Narlock &

Stevenson, 2016).   Many of these issues will be explored as part of this study because

they relate to the strategy of what educational programs are required to best prepare for

the community's ongoing health care professional needs.

Research Questions

1. What are the current health care needs of the population in Southwest Florida?

2. What are the health care professions that are most in demand in Southwest

    Florida?

3. What health care education programs are needed to meet the needs of the health

    care workforce of 2050 in Southwest Florida?

To address the first question, a literature review was conducted to explore health care

needs in Southwest Florida. To address the second question, a literature search was done

and to validate the data derived from the literature search, and archival *Key Informant Interviews* were reviewed to assess the health care professions most needed in Southwest Florida. And to address the third question, economic forecasts were examined to determine trends relevant to health care professions and services out to the year 2050, which was supported by themes gleaned from the local employer *Key Informant Interviews*.

Population

The population reviewed for the study is Southwest Florida, primarily Collier and Lee counties. Of these two, Lee County is the most highly populated county, and Collier County is projected to have some of the most rapid growth in the country over the next thirty years. Even though the two counties share some similar characteristics, they also have unique differences as the following comparisons indicate.

Assumptions

The report focuses on health care workforce needs based on population growth, the pace of growth in the Health Care and Social Assistance industry, and changes impacting health care workers' opportunities even though the occupational needs of the community clearly go beyond health care. It is also assumed that health care occupational trends identified for Southwest Florida apply to all counties in Southwest Florida; the geographic area includes not only Collier and Lee Counties, but also Charlotte, Hendry, Glades, and Monroe counties.

CHAPTER II
LITERATURE REVIEW

The literature search explored the characteristics of the major counties of Southwest Florida, Collier and Lee, and its workforce needs. The search included a review of local, state, and national health care economic trends projected to 2050. The search incorporated the analysis of health-related programs offered by the local universities in the area and emerging educational trends.

Method

The initial search was focused in response to Research Question 1: *"What are the current health care needs of the population in Southwest Florida?"* The search engine was Google and search term "Collier County needs assessment." The criteria used to narrow results where the date range 2016 forward and the report encompassed health care needs. Four Collier County reports met the criteria and are included in the literature review. The same Google search was conducted on "Lee County needs assessment" with the same date range, and health care needs criteria. Only two reports met the criteria for Lee County are considered as part of the literature review.

The second search was in response to Research Question 2: *"What are the health care professions that are most in demand in Southwest Florida?"* A search was conducted on Google with search terms "Collier County workforce," "Collier County careers," "Lee County workforce," and "Lee County careers." This search led to many organizations such as the Southwest Florida Workforce Development, CareerSource Southwest Florida, Greater Naples Chamber of Commerce, Enterprise Florida, and Florida Department of Economic Development; all have a website containing various

workforce reports and related data which have been included in the literature

review. Also, the United States Department of Labor, Bureau of Labor Statistics

provided a wealth of information.

In response to Research Question 3: "*What health care education programs are*

needed to meet the needs of the health care workforce of 2050 in Southwest Florida?"

searches were conducted on Google, PubMed, and Proquest. The search terms included

"healthcare workforce in 2050," "southwest Florida workforce in 2050," "trends in

higher education," "higher education," "vocational education," and "adult education."

The articles reviewed were limited to criteria of a date range within the past five years

and studies inside the United States.

Additionally, the literature review also included a search of local university

websites for health care program offerings. The websites for Keiser University (Keiser

University, 2018), Florida SouthWestern State College (Florida SouthWestern State

College, n.d.), Hodges University (Hodges University-Academics, n.d.), Nova

Southeastern University (Nova Southeastern University-Fort Myers, Florida, n.d.),

Florida Gulf Coast University (Florida Gulf Coast University, n.d.), and Rasmussen

College (Rasmussen College, n.d.) were reviewed and summarized in the *Program*

Comparative Analysis in Appendix I.   The analysis only considered the schools with a

physical presence in the community versus solely an online presence.

Health Care Needs in Southwest Florida

Collier County

A literature search on previous needs assessment, demand, and resulting strategic

initiatives in Southwest Florida led to many reports provided by entities with varying

objectives and related to their individual prospective interests.   The primary community

needs and health assessments reviewed for Collier County were from 2016 to date and

included: *Collier County: Community Needs and Assets Assessment* (2018), *Collier

County Community Health Improvement Plan*, (Revised March 2019), *Collier County

Community Health Status* (2016), *Collier County Florida Health Assessment* (2016), and

Collier County Community Health Assessment (2016).

The most comprehensive in terms of reviewing all community beyond the single

focus of health was released in 2018. It is an excellent overview of the many issues

within the community and a few of those included in the current study, notably: Health

Care, Education, and Other Social Services, and Health and Health Behaviors. Twenty-

seven organizations were members of the *Community Assessment Advisory

Committee*. Additionally, thirty-three documents were reviewed during the assessment of

prior reports, which helped illuminate the past research, entities involved in the study,

and the year a study was done. All research reviewed in the needs assessment was from

2010 forward (Q-Q Research, 2018).

In the category of health care, residents of the community expressed concerns

about the lack of primary care providers (PCP). They reported a sufficient supply of

dental providers but not satisfied with the affordability of the services. Mental health

care and addiction treatment are a significant concern of residents (Q-Q Research, 2018).

In response to this need, Collier County recently passed a one-cent sales tax increase, and

twenty-five million dollars of the revenue generated was earmarked for mental health

facilities and resources ("Mental health," 2018).

In the domain of Education and Other Social Services, residents reported being very satisfied with the quality of the educational offerings.   However, there is a gap and need in post-secondary options including vocational training. Many residents expressed concern about the need for affordable assisted living facilities and elder care to support the increasing elderly population (Q-Q Research, 2018).

The last domain relevant to the study is Health and Healthy Behaviors. The needs assessment determined that residents struggling with health issues have problems related to chronic illness, substance abuse, and obesity. One-fifth of the residents of Collier County engage in heavy drinking, and this population is mostly in the over 65 age group. In Collier County, there is a more significant proportion of residents participating in these behaviors than the rest of the state. Overall, more than 50% of the participants in the needs assessment revealed that residents struggled with alcohol use, illegal drug use, and prescription drug abuse (Q-Q Research, 2018).

Other factors relevant to consider in Collier County are the percentage of residents that live below or close to the poverty line, lack of affordable housing, and lack of transportation sources. Many families do not earn enough to cover basic needs due to the high cost of living in Collier County. Although unemployment has improved, both current and future projections indicate that many of the employment opportunities will still command salaries below the minimum required for self-sufficiency. Since a minimum of vocational training is required to obtain a salary that would meet the requirements to be self-supporting, the community needs education and training programs in professions with higher paying salaries (Q-Q Research, 2018).

Family income levels and transportation challenges also affect the ability of residents to attend school and finance their education. It also can be a determining factor in the level of education that residents will seek, e.g., a certificate program or associate degree that gives the student the knowledge and skills to get in the job market more quickly versus a bachelor, master, or doctorate degree that takes a much longer time and is a costlier commitment.

A summary of the priority health rankings based on a community health survey and twelve focus group discussions is depicted in Figure 3 below and has been included in all the other above mentioned community health assessment reports. The five highest ranked priority categories are Chronic Diseases (heart disease, diabetes, cancer), Mental Health, Access to Care, Alcohol and Drug Abuse, and Obesity (Florida Department of Health-Collier County [DOH], 2019).

Priority Health Rankings | 2012 and 2016 Comparisons										
All Foucs Groups (Combined)	September, 2012	Chronic Diseases 1	Access to Care 2	Obesity 3	Alcohol & Drug Abuse 4	Mental Health 5	Health of the Elderly 6	Communicable Diseases 7	Dental Health 8	Disabilities 9	Unintentional Injuries 10
	April, 2016	Chronic Diseases 1	Mental Health 2	Access to Care 3	Alcohol & Drug Abuse 4	Obesity 5	Health of the Elderly 6	Communicable Diseases 7	Disabilities 8	Dental Health 9	Unintentional Injuries 10

Figure 3. Priority Health Rankings-2016 versus 2012

Source: http://collier.floridahealth.gov/programs-and-services/community-health-planning-and-statistics/public-health-information/_documents/communityhealthimprovement.pdf, page 7

Lee County

The most recent health needs assessment in Lee County was conducted in 2017 for Lee Health & Florida Department of Health in Lee County by Professional Research

Consultants, Inc. The report summarized the results of a survey of a random sample of 1005 individuals over the age of 18 and a key informant survey of 146 community stakeholders (PRC, 2017). The data retrieved in the health assessment for Lee County were used to compare the population characteristics between Lee and Collier counties and the specific health factors of the community affecting health care occupational needs.

Some population characteristics of Lee County differ from Collier County. Lee County is 784 square miles with a population of 663,675 and a population density of 846 persons per square mile (PRC, 2017), whereas Collier County is 1,998 square miles of land with an estimated population density of 172 persons per square mile as of 2015 (Collier County Growth Management Department, Comprehensive Planning Section, 2016).

Lee County shared the same issues as Collier County and identified the following areas of opportunity for improvement:

Healthy Lifestyles

Nutrition, Physical Activity & Weight

Behavioral Health

Mental Health

Substance Abuse

Primary Care Alternatives

Access to Healthcare Services

Oral Health

Chronic Disease Management

Heart Disease & Stroke

Respiratory Diseases

Cancer

Diabetes

Potentially Disabling Conditions (such as activity limitations, arthritis,

osteoporosis, sciatica/back pain, and deafness/hearing trouble)

Tobacco Use (PRC, 2017).

Occupational Demand

Southwest Florida

The increase in the number of jobs resulting from the aging population and

increased population growth predominately require Post Secondary or Vocational

education. Figure 4 shows that employment growth in all categories by those with a Post

Secondary and Vocational education between 2017 and 2025 fills a total of 28,000

jobs. The next education level is Less Than High School at 13,602 jobs, and High School

at 12,181 jobs (Florida Department of Economic Opportunity [FDEO], 2018). Adult

vocational long-term growth occupations being cited as having the most growth during

this period related to health care are Nursing Assistants, Personal Care Aides, Medical

Assistants, Home Health Aides, and Registered Nurses (Westley, Timur, & Psihountas,

2018).
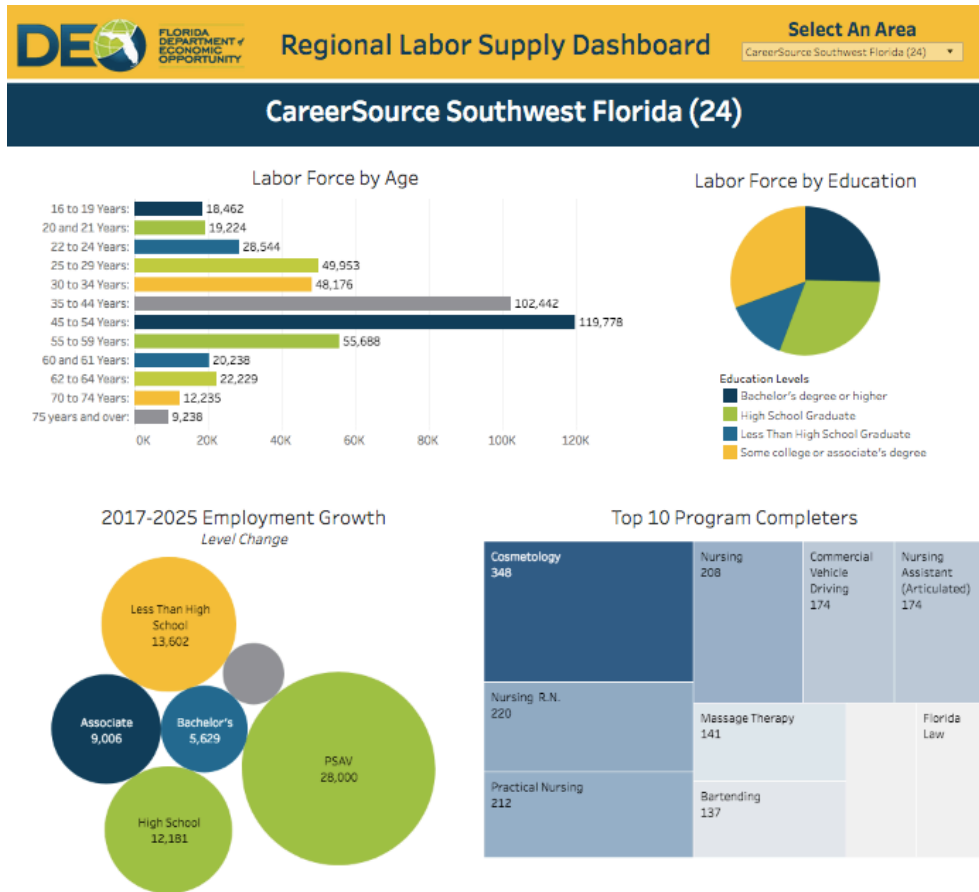
Figure 4. Labor Force Statistics

Source: http://lmsresources.labormarketinfo.com/labor_supply/index.html

Notably, the projections highlight the most significant needs of the community are

at low-level positions based on the analyses of jobs that are expected to

increase.   However, according to the Southwest Florida Workforce Overview Study, in

the summer of 2018, supply gaps in the healthcare practitioners and technical category

included many professions at the bachelor, master and doctorate levels as depicted in

Figure 5 below. In fact, eight out of the ten occupations showing gaps require at least a

bachelor's degree, and most of them are in the doctorate or master's category (Westley et

al., 2018).

Summer 2018				
Occupation	Supply Gap	Current Employment	Median Wage	Minimum Education
Physical Therapists	-88	855	$44.10	Doctorate
Speech-Language Pathologists	-34	359	$41.33	Master's
Family and General Practitioners	-29	735	$101.53	Doctorate
Pharmacists	-25	1,121	$60.05	Doctorate
Pharmacy Technicians	-25	1,673	$14.32	PS Adult Voc
Occupational Therapists	-20	316	$44.92	Master's
Physician Assistants	-18	396	$49.48	Bachelor's
Medical and Clinical Laboratory Technologists	-16	540	$28.96	Some College
Dietitians and Nutritionists	-14	135	$28.21	Bachelor's
Audiologists	-13	N/R	$39.50	Doctorate

Figure 5. Healthcare Occupations with the Highest Supply Gaps in Southwest Florida

Source: https://www.hodges.edu/wp-content/uploads/2019/01/SWFL-Workforce-

Overview-Study-2018.pdf, page 30

Another health-related occupation that requires consideration is Medical and

Health Services Managers as shown in Figure 6 below. New retirement communities are

being built every day and are desperately seeking expertise in healthcare administration

personnel.

Summer 2018				
Occupation	Supply Gap	Current Employment	Median Wage	Minimum Education
Medical and Health Services Managers	-92	591	$50.90	Bachelor's
Financial Managers	-67	864	$57.47	Bachelor's
Public Relations and Fundraising Managers	-17	57	$49.12	Bachelor's
Lodging Managers	-12	395	$23.79	Some College
Education Administrators, Elementary and Secondary	-11	292	$51.68	Bachelor's
Natural Sciences Managers	-10	50	$42.89	Bachelor's
Architectural and Engineering Managers	-5	223	$57.85	Bachelor's
Education Administrators, Postsecondary	-5	37	$57.68	Bachelor's
Farmers, Ranchers, and Other Agricultural Managers	-4	7,463	$49.75	Some College
Gaming Managers	-1	N/R	N/R	PS Adult Voc

Figure 6. Supply Gap for Medical and Health Service Managers in Southwest Florida

Source: https://www.hodges.edu/wp-content/uploads/2019/01/SWFL-Workforce-

Overview-Study-2018.pdf, page 32

The majority of the top ten professions considered the fastest growing in

Southwest Florida are in health care and are ranked in Figure 6: Nurse Practitioners,

Physician Assistants, Home Health Aides, Physical Therapist Assistants, Personal Care

Aides, and Diagnostic Medical Sonographers.

Ra..	Occupation Code	Title	Employment 2017	Employment 2025	Growth	Percent Growth	Total Job Openings	2017 Median Hourly Wage	Education Level
1	291171	Nurse Practitioners	352	484	132	37.5	291	45.16	Master's or Higher Degree
2	151134	Web Developers	266	365	99	37.22	280	22.88	Postsecondary Vocational
3	291071	Physician Assistants	396	534	138	34.85	318	49.48	Bachelor's Degree
4	311011	Home Health Aides	2,059	2,746	687	33.37	2920	12.28	Postsecondary Vocational
5	312021	Physical Therapist Assistants	392	517	125	31.89	517	31.46	Associate Degree
6	399021	Personal Care Aides	2,616	3,438	822	31.42	4235	10.84	Postsecondary Vocational
7	292032	Diagnostic Medical Sonographers	364	478	114	31.32	284	34.61	Postsecondary Vocational
8	472021	Brickmasons and Blockmasons	683	880	197	28.84	778	18.03	Postsecondary Vocational
9	131111	Management Analysts	1,944	2,501	557	28.65	2046	40.24	Bachelor's Degree
10	131081	Logisticians	259	333	74	28.57	266	27.64	Bachelor's Degree

Figure 7. Fastest-Growing Occupations in Southwest Florida by 2025

Source: http://lmsresources.labormarketinfo.com/labor_supply/index.html

As indicated in Figure 7, health care related occupations gained fewer job

positions in Southwest Florida when compared to the fastest growing categories. Lower

level health care occupations such as Nursing Assistants and Registered Nurses are quite

important, as they could be feeder programs to many of the advanced nursing programs.

Both professions are projected to gain the most jobs in Figure 7 with Registered Nurses

ranked number two, and Nursing Assistants ranked number seven.

Occupations Gaining the Most New Jobs

Rank	Occupation Code	Title	Employment 2017	Employment 2025	Growth	Percent Growth	Total Job Openings	2017 Median Hourly Wage	Education Level
1	412031	Retail Salespersons	24,294	28,399	4,105	16.9	34,842	11.15	High School Diploma
2	291141	Registered Nurses	10,434	12,625	2,191	21	6,925	31.18	Associate Degree
3	373011	Landscaping and Groundskeeping Workers	14,003	16,021	2,018	14.41	16,174	11.96	Less than High School
4	353021	Combined Food Prep. and Serving Workers, Inc. Fast Food	11,812	13,557	1,745	14.77	20,350	9.65	Less than High School
5	472061	Construction Laborers	9,080	10,786	1,706	18.79	9,756	14.11	Less than High School
6	434051	Customer Service Representatives	9,073	10,489	1,416	15.61	11,004	14.41	Postsecondary Vocational
7	311014	Nursing Assistants	6,538	7,951	1,413	21.61	8,148	13.24	Postsecondary Vocational
8	353031	Waiters and Waitresses	17,102	18,382	1,280	7.48	27,815	9.88	Less than High School
9	352014	Cooks, Restaurant	7,460	8,703	1,243	16.66	10,417	13.31	Postsecondary Vocational
10	472031	Carpenters	7,417	8,614	1,197	16.14	6,934	18.45	Postsecondary Vocational

Prepared by the Florida Department of Economic Opportunity, Bureau of Labor Market Statistics, updated 5/15/2018.

Figure 8. Occupations Gaining the Most New Jobs in Southwest Florida by 2025

Source: http://lmsresources.labormarketinfo.com/labor_supply/index.html

The State of Florida and National Trends

The health care occupational trends for the state of Florida are similar to those identified in Southwest Florida. According to Narlock and Stevenson (2016), Florida is a state positioned to keep pace with its health care professional needs. However, unlike many of the other states, Florida will require higher-level technical expertise such as Surgeons, Physicians, Anesthesiologists, and Physical Therapists. As indicated in the magnified upper right quadrant of the scatter plot in Figure 9, there is a considerable demand for mid-level providers such as Physician Assistants, Nurse Practitioners, and Nurse Anesthetists (Narlock & Stevenson, 2016).
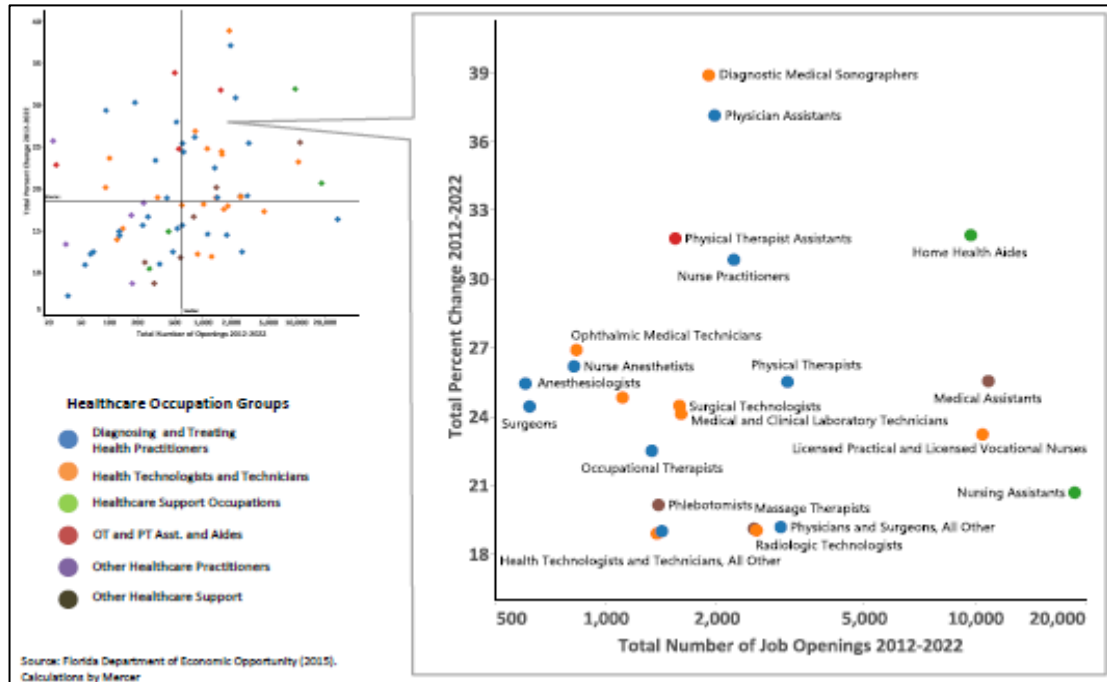
Figure 9. Florida Healthcare Occupation Percent Change and Job Openings

Source: Florida Department of Economic Opportunity (2015). Calculations by Mercer

According to the Bureau of Labor Statistics, 50% of the fastest growing

occupations from 2016 to 2026 in the United States will be health related as exhibited in

Fastest Growing Occupations in Appendix II (US Bureau of Labor Statistics [BLS],

2018). On a national level, the following are included in the top fifteen fastest growing

occupations in the health-related professions:

- Home Health Aides

- Personal Care Aides

- Physician Assistants

- Nurse Practitioners

- Physical Therapist Assistants

- Medical Assistants

- Genetic Counselors

· Occupational Therapy Assistants

Strategy

In addition to the needs and demands discussed above, the impact of trends in health care must be considered. Probably the most significant trends impacting the current area is the shortage of Primary Care Physicians, the aging population, the population growth, and increased number of insured individuals due to the Affordable Care Act (ACA). To give an example of the extent of the Primary Care Physician workforce demand in Florida, it is predicted that just to remain at status quo which is 1537:1 versus the national average of 1463:1, there will need to be an additional 4,671 increase in providers from 2010 to 2030 (Petterson, Cai, Moore, & Bazemore, 2013).   The physician shortage can drive a change in care models or result in the substitution of providers such as Nurse Practitioners (Auerbach, 2012).

The increase in population particularly in the over 65-age group with increased life expectancy, coupled with more individuals becoming insured, leads to higher utilization of health care and thus new job opportunities. The increased elderly population growth along with the projected increase in the number of Alzheimer's disease cases creates a demand for more Assisted Living and Skilled Nursing beds. And following the ACA enactment, the uninsured in Collier County went from 23.2 percent of the total resident population in 2010 to a decreased 18.7 percent of the population in 2014 (Florida Health Collier County, 2016).

However, for the previous two decades, the number of insured 18-64 years of age had been declining and had worsened during the recession beginning in 2006 which had negatively impacted access to care. There is an inverse correlation between education

attainment and income level with the percentage of uninsured individuals. The rate of

uninsured population decreases as the education level and income level increases. Focus

groups in the community express concern that there is a shortage of health care

professionals especially those accepting Medicare and Medicaid and indigent patients

(Florida Health Collier County, 2016).   Thus, matching educational opportunities to

meet the community needs increases access to health care, which was previously noted as

a community priority. Yet, it is also key to have enough health care providers in place to

provide the services.

  Beyond selecting educational programs to meet community needs and workforce

demands, another consideration in initiating new educational programs is to review the

requirements of accrediting bodies for resources required and timelines. Some

accrediting agencies' requirements are very demanding, e.g., costly upfront requirements,

as well as long timelines before the program is implemented and starts to collect tuition

dollars to offset the upfront costs. Accrediting bodies can require the acquisition of staff

long before there are students or request a site visit to the campus before authorizing

accreditation.

  At the same time, universities are trying to meet the needs of the community, the

logical progression of adding programs to a specific university would be to match

program needs with the university most experienced with those needs. For example, if

the community acknowledges a need for a newly developed program in Primary Care

Technicians (PCT) to help alleviate the PC workforce gap, universities offering an

Emergency Medical Services or a Paramedic program would be best situated to provide

the PCT program (Kellermann, Saultz, Mehrotra, Jones, & Dalal, 2013).

An example of a community effort in Southwest Florida to educate the local area from preschool to job placement is the FutureMakers Coalition. One successful attempt to highlight began when Lee Health was experiencing a chronic shortage of Certified Nurse Assistants (CNAs). Lee Health partnered with CareerSource Southwest Florida, Southwest Florida Community Foundation, Cape Coral Technical College, and Fort Myers Technical College to develop a model that was a "whole student approach." Each organization had been individually supporting students; however, they were limited in their effectiveness of working on their own. Although the organizations admitted difficulties in changing their organizations' processes to work as a team, the combined effort of all entities was able to uncover roadblocks that otherwise would never have come to light. The coalition targeted areas of low income with high unemployment or underemployed individuals to select participants for their pilot. They offered scholarships provided from the Southwest Florida Community Foundation to pay tuition, and CareerSource was able to attract other sources of funds to help with non-education barriers such as housing insecurity, transportation, and food scarcity. However, the Coalition found that even though the students were completing the program, they were not taking the certification exams due to lack of funds, and the students lacked skills such as the ability to fill out job applications, resume writing, and interview preparation. The Coalition helped the students overcome these challenges and provided them with the tools to enter the workforce. The result was that Lee Health was able to reduce its shortage of CNAs by 60 positions in 18 months (FutureMakers Coalition [Coalition], n.d.). This example demonstrates how the community came together to solve one of its workforce challenges.

Conclusion

The literature indicates that the population is rapidly growing in Southwest Florida. There is a need for an alternative to primary care providers, which could indicate a need for Nurse Practitioners. Also, both counties are dealing with mental illness and substance abuse as areas that need attention and will require health care professionals experienced to deal with those specific disorders. Last, the aging population brings multiple chronic health conditions that will require health care providers at all levels to be trained to recognize patients with multiple co-existing diseases and manage patients with dementia and Alzheimer's.

It is interesting that none of the workforce studies in the area were focused solely on healthcare occupations. The gap reinforces the need for this study and resulting community report. The targeted occupations offering opportunities for program development are outlined as *Targeted Opportunities* in Appendix III and includes all the health care professions recognized to have a shortage, gain the most jobs in the future years, or be a community need.

CHAPTER III
METHODOLOGY

Research Design

The current study proposed is a mixed method analysis that involves both primary and secondary research. The secondary research is a part of the initial literature review and summary, which included local health care needs, and national and local health care workforce needs for the next ten years. The literature search helped narrow down the field of potential jobs to those that are projected to be the fastest growing or in highest demand.

Additionally, readers need to know which universities would be positioned to initiate education programs to meet community needs based on the program experience they already have. Appendix I summarizes and maps local health-related programs by certificate or degree offered. The traditional local universities servicing the Southwest Florida counties of Collier and Lee are Florida Gulf Coast University, Hodges University, Keiser University, Nova University, and Southwest Florida University.

The balance of the research is both quantitative and qualitative and will utilize two methods for data analysis. The quantitative analysis involves interpretation of the economic databases from Woods and Poole Economics, Inc. (2018) specific to Collier County and Lee County projected out to the year 2050. The database will be sorted and summarized in charts to analyze specific trends. The trends for the five categories explored are projected Total Population by Age Group, Total Population by Ethnicity-Race, Number of Households with Money Income, Earnings by Industry Sector, and Number of Jobs by Industry Sector

      The qualitative analysis utilizes archival data from seven *Key Informant Interviews* to isolate issues of relevance and validate the needs within the community for professions identified as the fastest growing and high need professions, such as registered nurses, nurse practitioners, physician assistants, sonography assistants, and health professionals. The interviews were semi-structured and allowed the interviewees to share information freely (Oun & Bach, 2014).

      Simultaneously as the 2050 projections are being analyzed, the data collection process occurs through the *interpretive technique* of *coding* as outlined in Figure 10 below. Recurring themes will be coded and summarized in charts. The needs expressed by employers and the resulting economic demands based on the projections of 2050 will be correlated to determine the ranking for future health care professional needs.
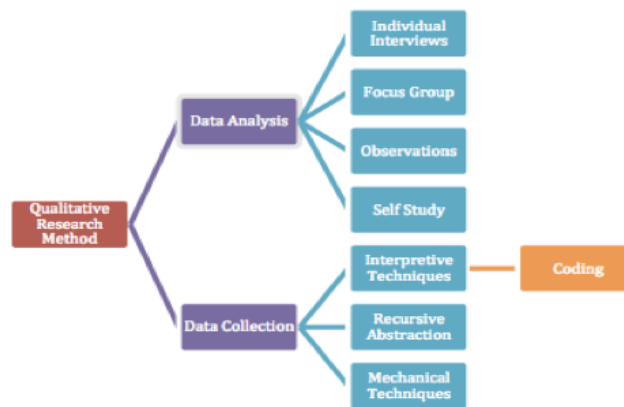
Figure 10. Interpretive Technique of Coding

Source: http://www.jmest.org/wp-content/uploads/JMESTN42350250.pdf

Sample Selection

      The sample selection for the *Key Informant Interviews* included significant employers and a variety of healthcare settings such as hospital systems, assisted living communities, a mental health facility, and a home health company located southwest

Florida. The main criterion used in the selection of the *Key Informant Interviews* was that the employer was servicing an identified health care need per the community assessments. The second criterion was for the health care business to employ numerous employees to achieve a high representation of the job requirements from the community.

The two major hospital systems within the area are Lee Health System and NCH Healthcare System. The Lee Health System employs 13,000 individuals, and NCH Healthcare System has 3,800 staff members ("Lee Health," 2018) (NCH Healthcare System [NCH], 2016).   The health systems' feedback provides a critical assessment of the most urgent staffing needs at all levels. Their partnership is essential to ensure their workforce needs are being met through collaboration with workforce development agencies and educational entities. Each party provides a unique perspective of how an individual moves from being unemployed to receiving education and training, to becoming employed.

Moorings Park is a large upscale retirement community located in Collier County. Since Collier County has been recognized as having an above average retirement age population, considering the needs of this population is a high priority for meeting the needs of the community.

An important interview was with the CEO of David Lawrence Center, a mental health-substance abuse facility. As mentioned earlier, mental health issues and substance abuse are problems for both Collier and Lee Counties, and Collier County passed a one-cent sales tax increase in November 2018 with 25 million dollars being dedicated to increasing the resources at David Lawrence Center ("Mental health," 2018).

Another community of interest interviewed was a home health company franchise. There is an increasing trend of care moving out of the hospital into the home as the medical community focuses on patient-centered care and is reinforced by changes in reimbursement to providers.

The results contained within this chapter are summarized in the following categories: Economic, Quantitative, and Qualitative.

Economics

Population and Age

The economic projections to 2050 have been prepared from databases acquired from Woods & Poole Economics, Inc. (2018). Many indicators in Collier and Lee counties have been reviewed to highlight trends from 2010 and if they continue, what they will look like in 2050. Collier County's total population grows from 322,700 in 2010 to 722,000 in 2050, a 124% increase. Like Collier County, the total population of Lee County continues to grow and swells from 620,000 in 2010 and doubles to 1,243,700 in 2050. Figures 11 and 12 highlight both counties growing to a total population over 65 years estimated at 676,000 residents.
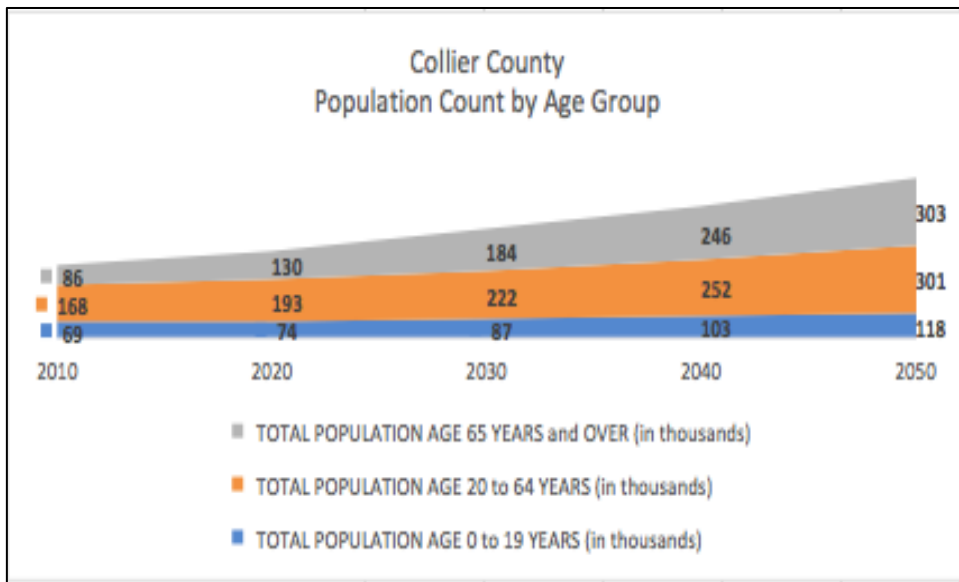
Figure 11. Collier County Population by Age Group
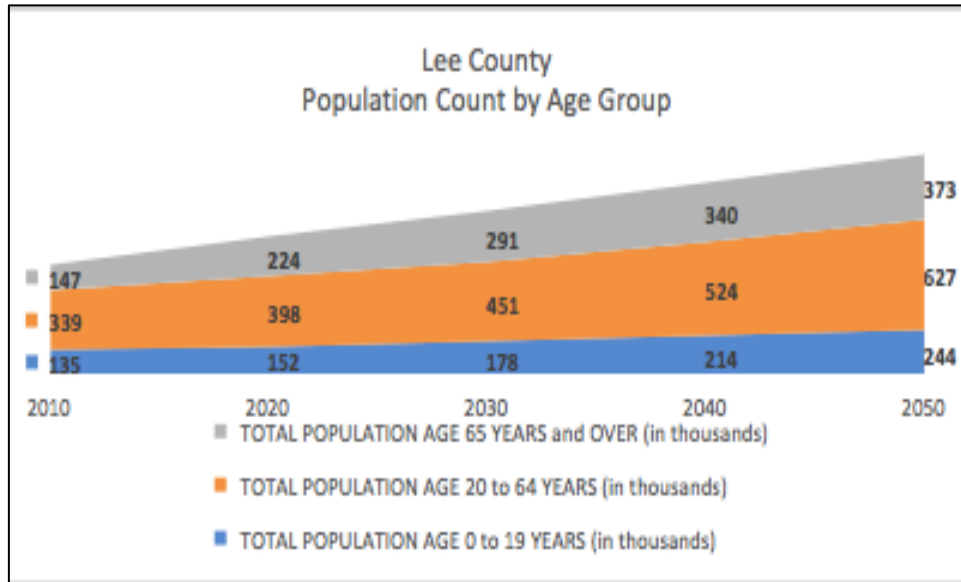
Figure 12. Lee County Population by Age Group
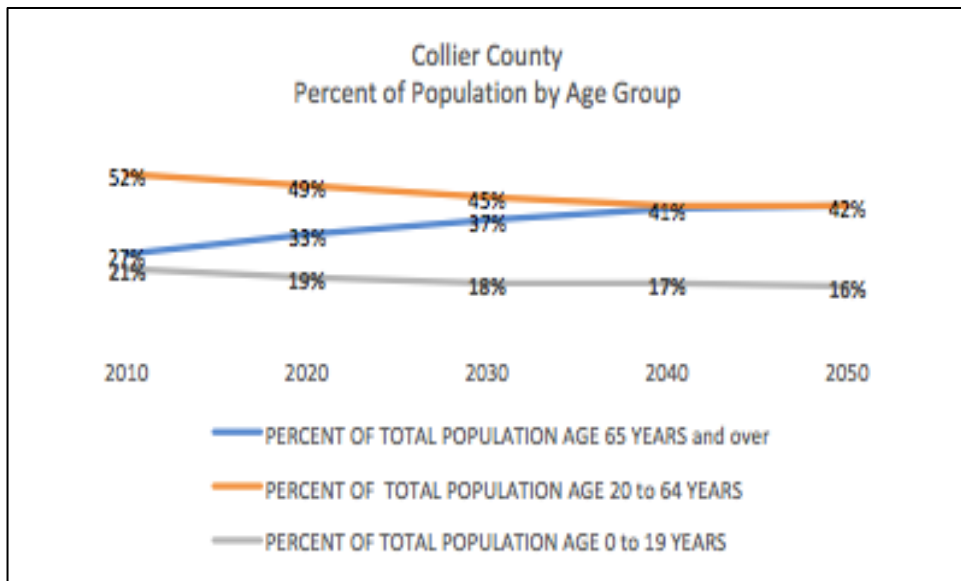
Figure 13. Collier County Percent of Population by Age Group

Both counties show population by the number of residents and as a percent of the

population in Figures 13 and 14, that the Age 65 Years and over increases significantly in

the coming years and projected out to 2050. This impacts the number of healthcare

providers required and the specific type of education and training they will require to

meet the needs of an aged population. Much of this increase is likely due to the

continued migration of retirees from other states to Southwest Florida.
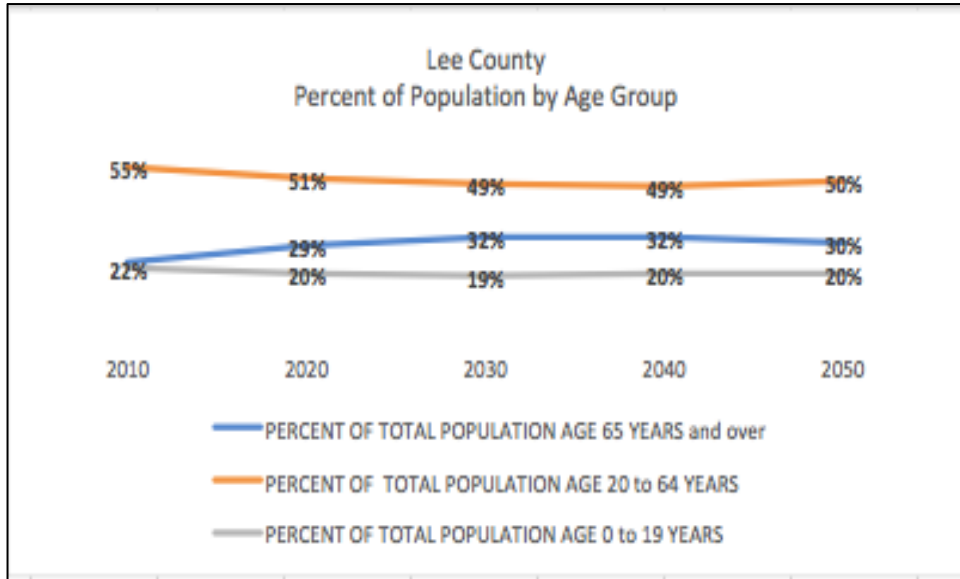
Figure 14. Lee County Percent of Population by Age Group
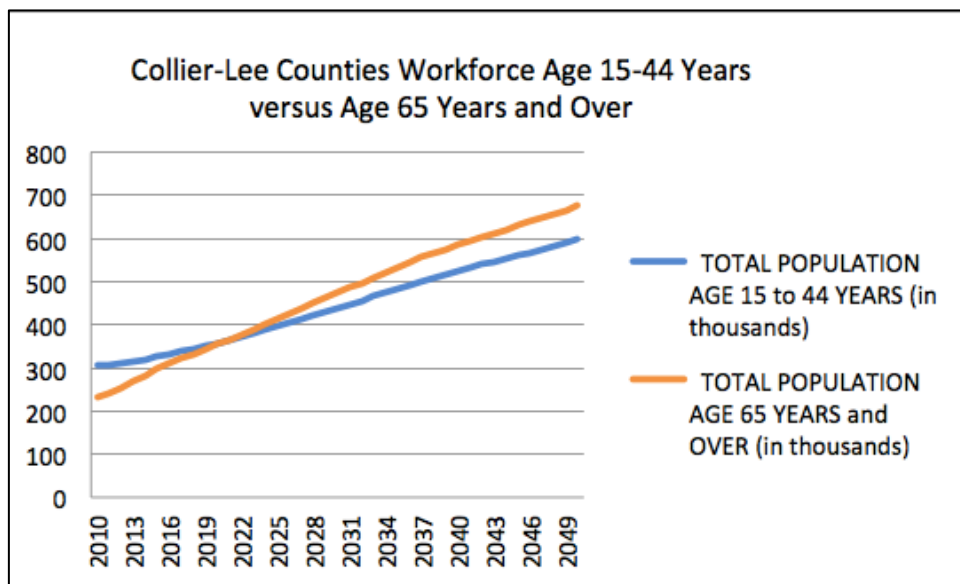
Figure 15. Collier-Lee Counties Workforce Age 15-44 Years versus Age 65 Years and

Over.

Figure 15 highlights that the population Age 65 and over between the two counties grows faster than the population Age 15 to 44 years, the retirees versus the workforce. Regional differences between Figures 13 and 14 indicate that Lee County will have a younger population to potentially recruit a health care workforce to support the older population in Collier County.   It is critical that higher education institutions build the pathway for high school students located in Southwest Florida to stay locally and become part of the critically needed health care workforce.

Ethnicity-Race

In terms of ethnicity-race, Figure 16 below shows that in Collier County the total population Hispanic or Latino is at 318,000 in 2050 and approaches the White Non-Hispanic population at 343,000. Figure 17 shows the Hispanic or Latino segment increasing from 26% of the population in 2010 to 44% of the population in 2050, which is a 69% increase. Almost half of the population in Collier County will be Hispanic or Latino.
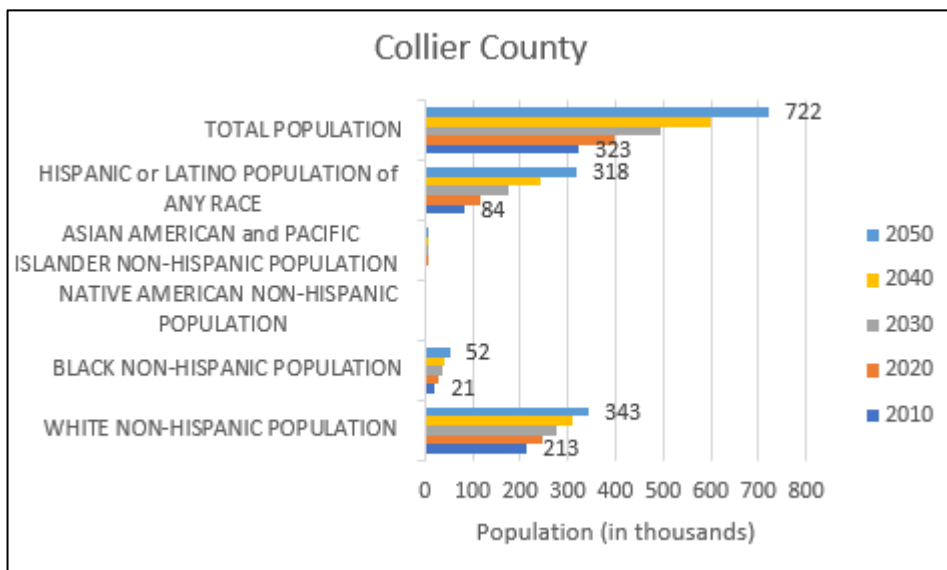
Figure 16. Collier County Population by Ethnicity-Race
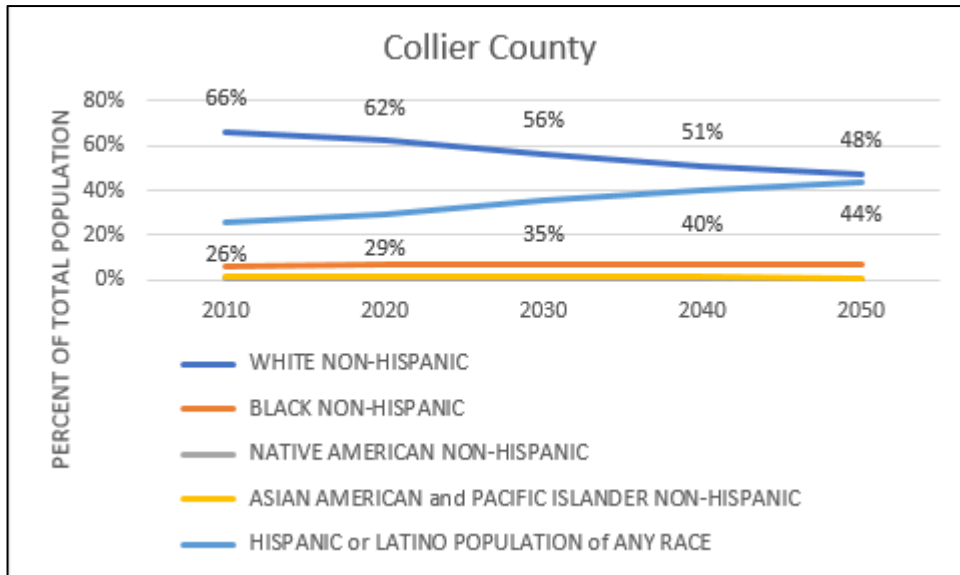
Figure 17. Collier County Percent of Total Population by Ethnicity-Race

In Figure 18 below, there is a more dramatic change in Lee County with the

Hispanic or Latino population increasing from 114,000 in 2010 to 498,000 in 2050 versus

the White Non-Hispanic population rising from 445,000 in 2010 to 581,000 in 2050.

Figure 19 below shows an increase in the percentage of the Hispanic or Latino population

increasing from 18% in 2010 to 40% in 2050, which is a 122% increase over 40 years.

At the same time, the White Non-Hispanic population decreases from 72% in 2010 to

47% in 2050 or a 35% decrease. Like Collier County, Lee County also has a significant

shift from a White Non-Hispanic population to a significant presence of the Hispanic or
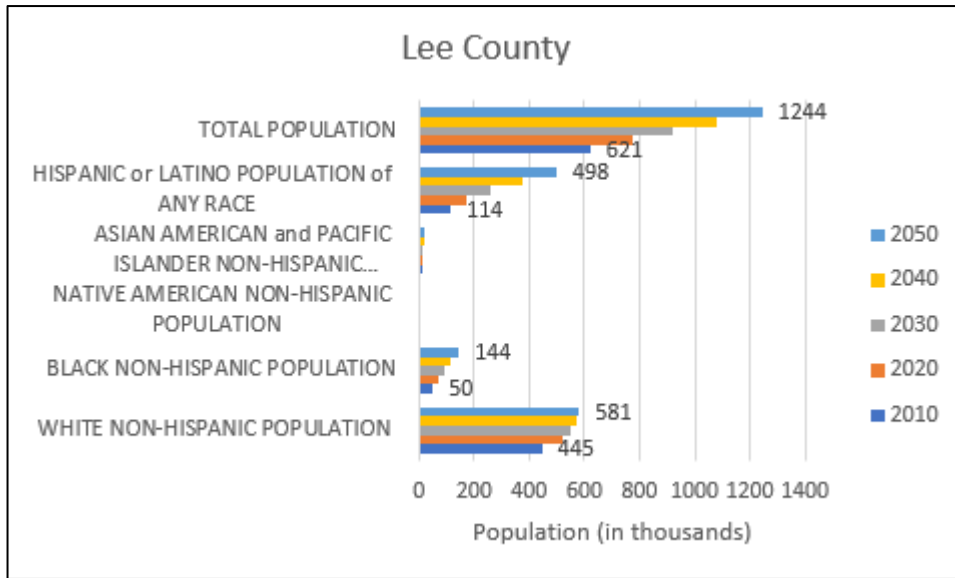
Latino population.

Figure 18. Lee County Population by Ethnicity-Race

Figures 11-19 indicate the elderly population is multiplying and the working populations if not changing except that the workforce is becoming predominantly Hispanic, which is likely to induce a significant mismatch between the cultural mores of elderly patients seeking care and that of the young workers who provide the care.
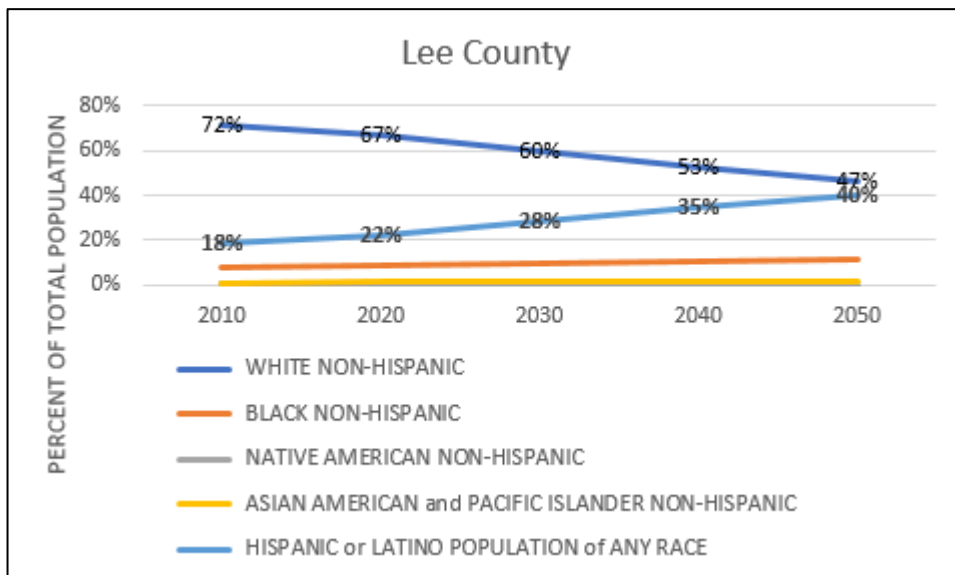
Figure 19. Lee County Percent of Total Population by Ethnicity-Race
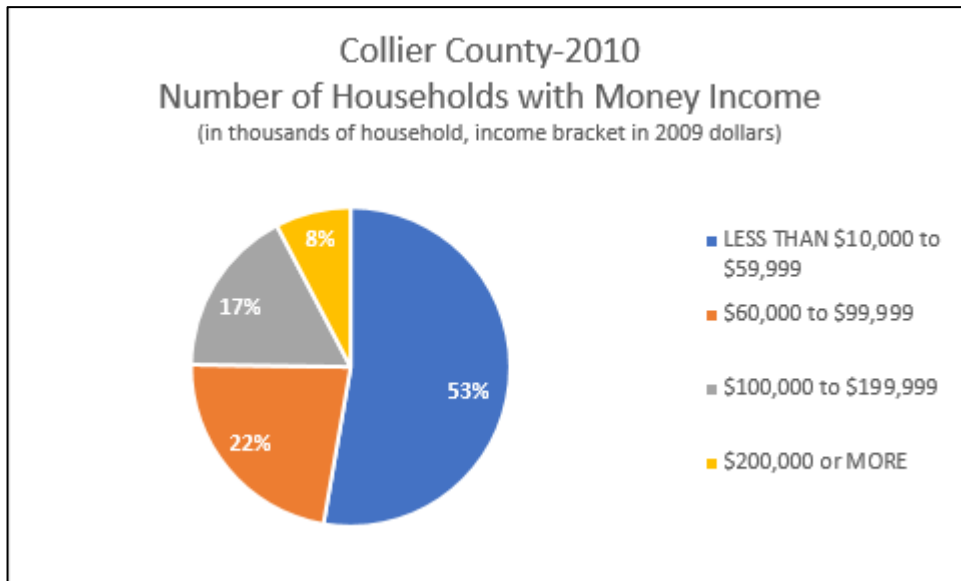
Figure 20. Collier Count 2010 Number of Households with Money
Income

Number of Households with Money Income

Figures 20, 21, 22, 23 discuss household income with money income versus stock

or services in Collier and Lee counties and the changes projected to occur between 2010

and 2050. In 2010, the largest percentage of 53% of the population had a household

income below $60,000 as shown in Figure 20 above. Interestingly, Figure 21 reveals that

the same household income bracket decreases to 31%. The income brackets over

$100,000 increase from 25% in 2010 to 41% 2050.
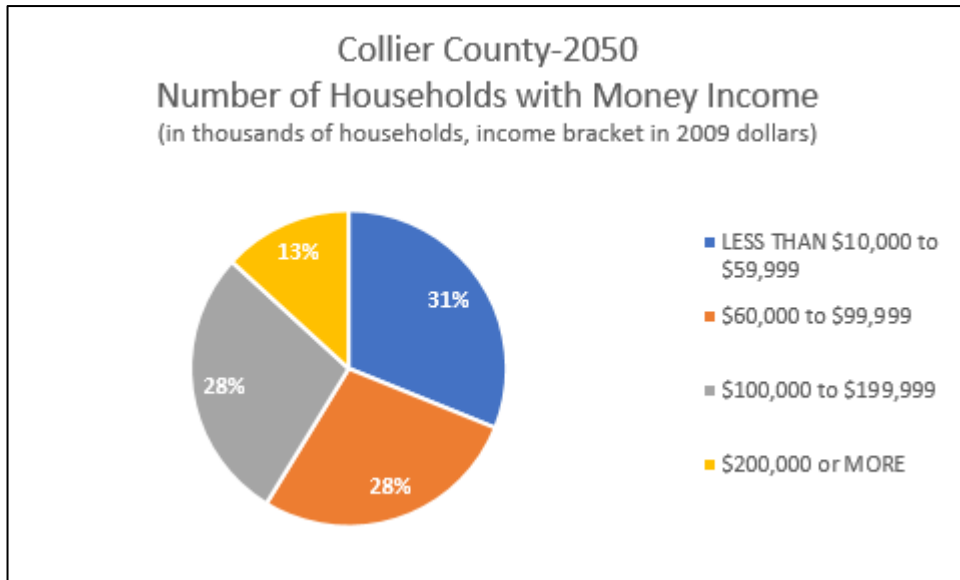
Figure 21. Collier County 2050 Number of Households with Money Income
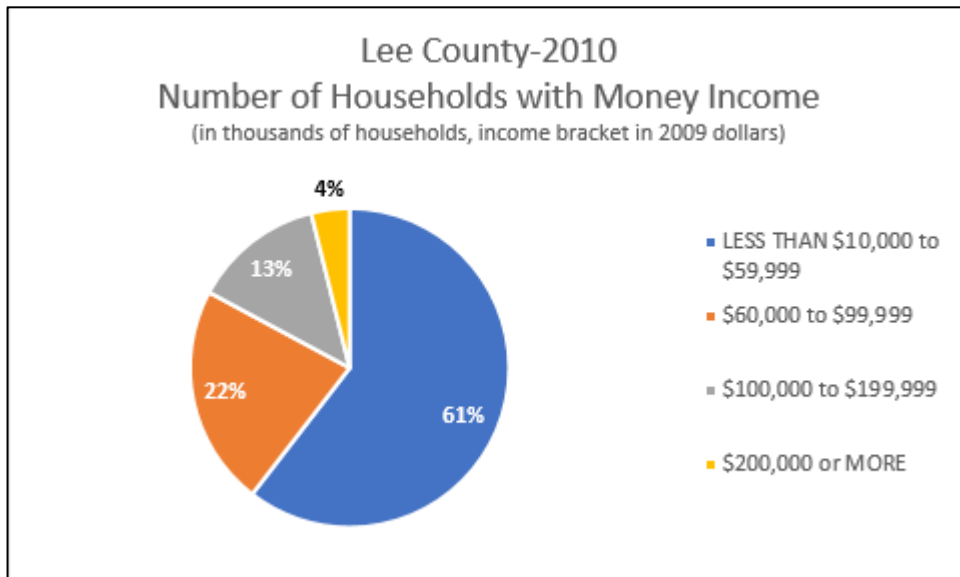
Figure 22. Lee County 2010 Number of Households with Money Income

Figure 22 above indicates in Lee County 61% of households of the population is in income brackets under $60,000. Figure 23 shows that household incomes increase in 2050 in Lee County; however, 66% are still under $100,000.   Since affordable housing and high cost of living in Collier County has been identified as a significant problem, it seems that the lower income health care workforce will migrate to and primarily be

located in Lee County versus Collier County in the coming years.   Also, in both Collier and Lee Counties, the number of households will have higher incomes overall, it should correlate to greater access to care and higher utilization of health care services.
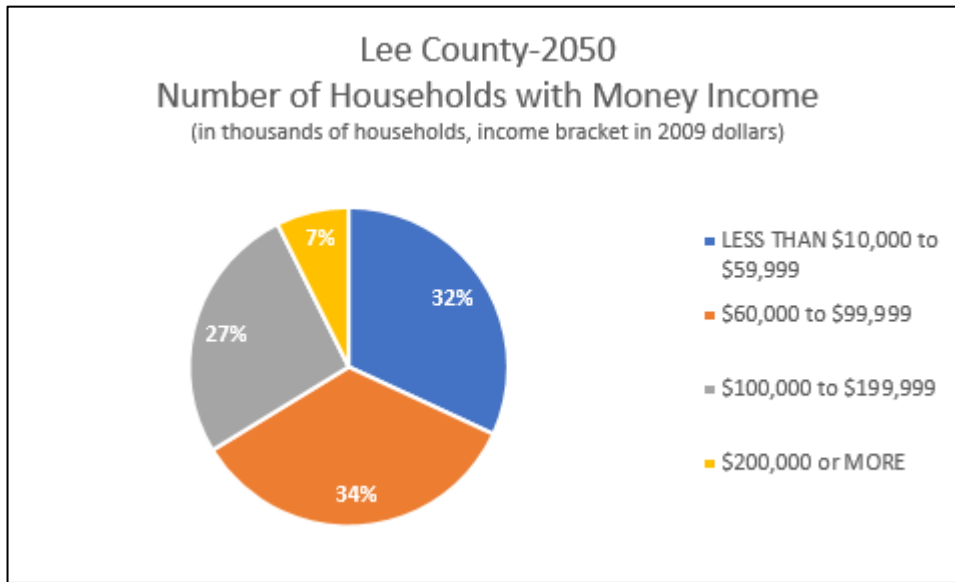
Figure 23. Lee County 2050 Number of Households with Money Income

Industry Earnings

The trends in Figure 24 aand Figure 25 below show that in both Collier County and Lee County, Health Care and Social Assistance is the industry sector where most of the household income will be generated at almost 7.6 million dollars in 2050 between the two counties.   The rapid increase in healthcare earnings in Collier County between 2025 and 2050 correlate with the increase in population over 65 years and the increase in health care services that will be required by that age group. It is interesting to note that $3.665 million will serve a population of 722,000 in Collier County whereas $3.919 million for a population of 1,244,000 in Lee County.
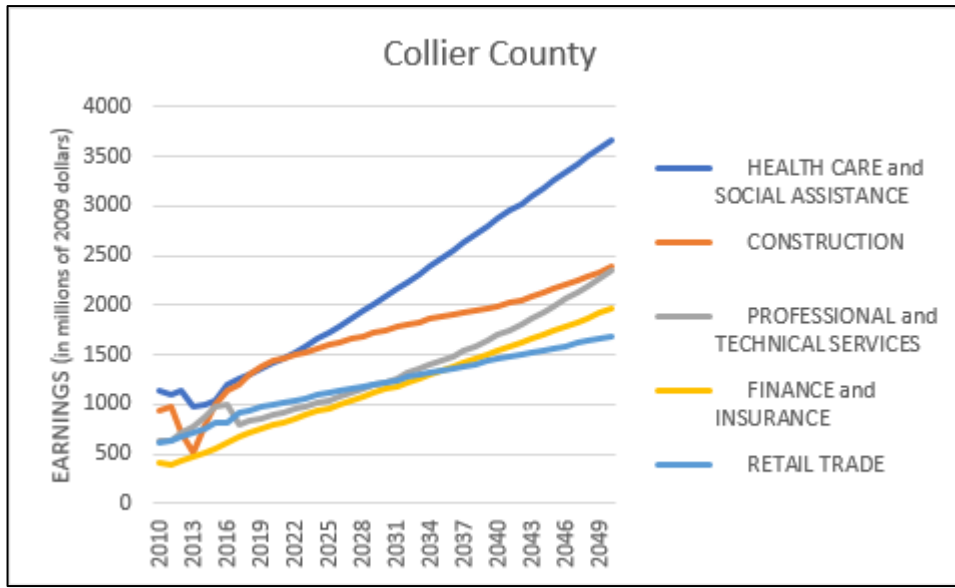
Figure 24. Collier County Earnings by Industry Sector
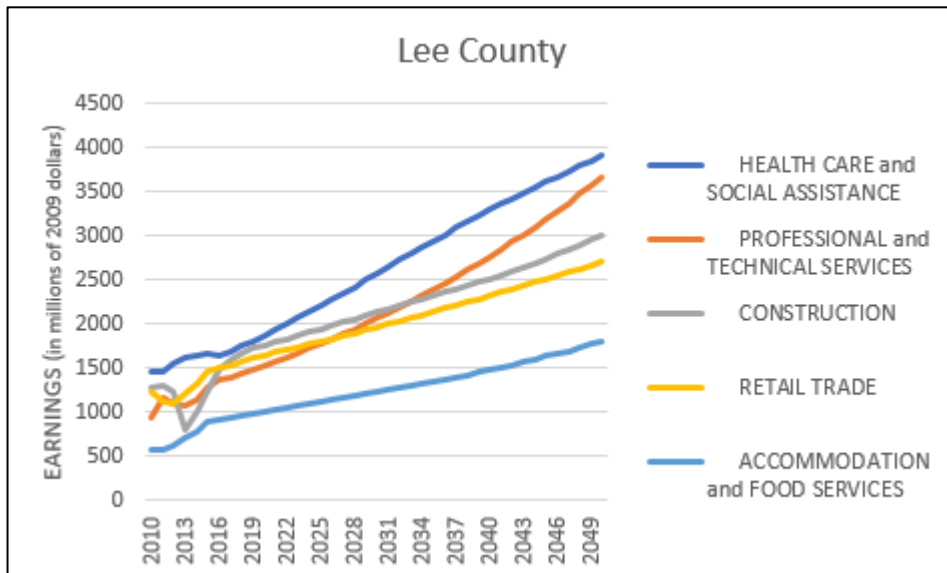
Figure 25. Lee County Earnings by Industry Sector
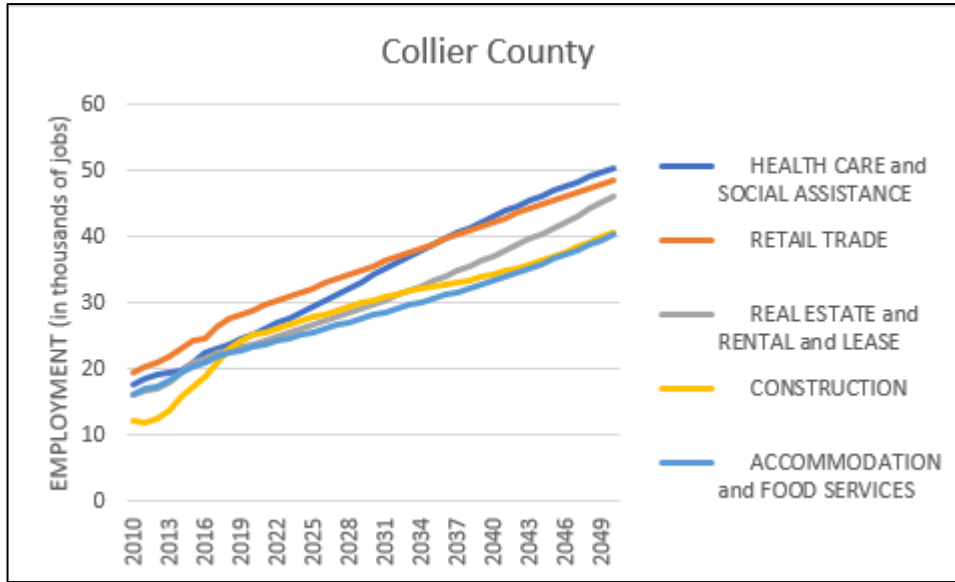
Figure 26. Collier County Employment by Industry Sector

Employment by Number of Jobs

Figure 26 indicates most jobs in Collier County, 51,000, will be in Health Care and Social Assistance. In Lee County, Figure 27, the Health Care and Social Assistance sector ranks fifth at 55,000 jobs. Again notably, for a population that is almost half of Lee County, Collier County employs only 4,000 less health care workers once again demonstrating the higher requirements of health care services due to the aging population in Collier County.
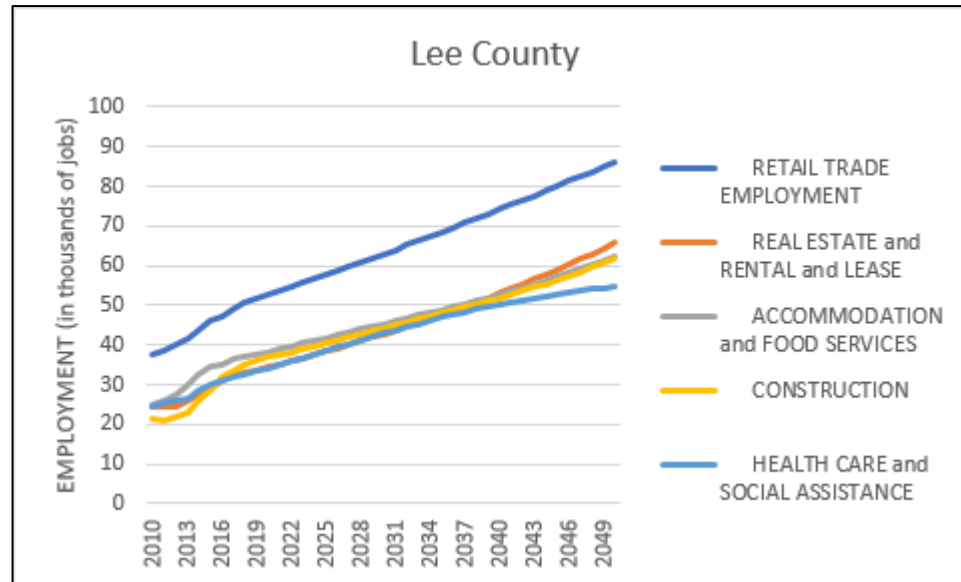
Figure 27. Lee County Employment by Industry Sector

Quantitative

The quantitative data is secondary data collected from various workforce studies and summarized in charts. In Table 1 below, all occupations mentioned in the diverse workforce reports in terms of employment gaps, fastest growing, or are occupations expected to have the most gains in terms of the number of jobs have been included in the table. A one has been noted in the column when the particular occupation was predicted to have a current shortage, be one of the fastest growing occupations or increase in the number of jobs within the next five years. The columns are summed to determine what occupations are ranked to have the most of those attributes in common. The occupations highlighted in red have most commonly been cited in the workforce as a current or future occupational need.   Physician Assistants were the highest ranked followed by Diagnostic Medical Sonographers, Home Health Aides, Medical and Clinical Laboratory Technologists, Nurse Practitioners, Nursing Assistants, Occupational Therapists, Physical Therapists, and Physical Therapist Assistants.

Occupations	Southwest Florida Employment Supply Gap	Fastest Growing in Southwest Florida	Gaining the Most Jobs in Southwest Florida	Top Ten Growing the Fastest and Most in Florida	Total
	See Figure 4	*See Figure 6*	*See Figure 7*	*See Figure 8*	
Anesthesiologists				1	1
Audiologists	1				1
Diagnostic Medical Sonographers		1		1	2
Dietitians and Nutritionists	1				1
Family and General Practitioners	1				1
Health Technologists and Technicians, All Other				1	1
Home Health Aides		1		1	2
Licensed Practical and Licensed Vocational Nurses				1	1
Medical and Clinical Laboratory Technologists	1			1	2
Medical and Health Services Managers	1				1
Medical Assistants				1	1
Nurse Anesthetists				1	1
Nurse Practitioners		1		1	2
Nursing Assistants			1	1	2
Occupational Therapists	1			1	2
Ophthalmic Medical Technicians				1	1
Personal Care Aides		1			1
Pharmacists	1				1
Pharmacy Technicians	1				1
Phlebotomists				1	1
Physical Therapist	1			1	2
Physical Therapist Assistant		1		1	2
Physician Assistants	1	1		1	3
Physicians and Surgeons, All Other				1	1
Radiologic Technologists				1	1
Registered Nurse			1		1
Speech-Language Pathologists	1				1
Surgeons				1	1
Surgical Technologist				1	1

Table 1. Quantitative Summary of Occupational Workforce Reports (1=Included in the report as a high demand occupation)

Qualitative

The qualitative data were obtained from archival *Key Informant Interviews* and used to corroborate data collected from the workforce reports and economic data.

Occupations	Home Health	Hospice	Hospital	Mental Health	Retirement	Physician Group	Total
Certified Nurse Assistants			1		1		2
Diagnostic Medical Sonographers			1				1
Home Health Aides	1						1
Licensed Practical Nurses					1		1
Medical Assistants			1			1	2
Medical and Clinical Laboratory Technologists			1				1
Medical and Health Services Managers			1		1	1	3
Mental Health Counselors				1			1
Nurse Practitioners			1	1		1	3
Personal Care Aids		1					1
Physical Therapists		1					1
Physician Assistants						1	1
Psychiatrists				1			1
Radiology Technicians			1				1
Registered Nurse-BSNs		1	1				2
Social Workers		1		1			2

Table 2. Qualitative Summary of Common Occupational Needs from Key Informant
Interviews (1=Interviewee expressed job as a high need)

Table 2 above consists of the occupations identified in the *Key Informant
Interviews* as jobs most needed and hard to fill. Column 1 represents the occupations,
and the subsequent columns, Home Health, Hospice, Hospital, Mental Health Facility,
Retirement Community, and Physician Group are noted with a one if the interviewee
named that occupation as a current need and also in the future. All columns are totaled to
determine the relative need per the interviews of any particular occupation and the top
professions are highlighted in red. Medical and Health Services Managers and Nurse
Practitioners were found to be the two most commonly needed professions among the
interviewees.

Table 3 below incorporates the results from the quantitative and qualitative
analyses and ranks the occupations where there are the most gaps, most needs, fastest
growing or occupations gaining the most jobs in future years. Nurse Practitioners topped
the list as the occupation in most demand followed by Physician Assistants, Nursing
Assistants, and Medical Health and Service Managers. The next level of demand is
Diagnostic Medical Sonographers, Home Health Aides, Physical Therapist, Registered

Nurse, Medical and Clinical Laboratory Technologists, and Medical Assistants. It is

important to note that education spans from doctorate degrees to six-week certificate

programs. Each educational institution will be uniquely suited to offer or develop these

programs.

Occupations	Summary from Quantitative Analysis	Summary from Qualitative Analysis	Rank in Terms of Most Commonly Cited Need
Nurse Practitioners	2	3	5
Physician Assistants	3	1	4
Nursing Assistants	2	2	4
Medical and Health Services Managers	1	3	4
Diagnostic Medical Sonographers	2	1	3
Home Health Aides	2	1	3
Physical Therapist	2	1	3
Registered Nurse	1	2	3
Medical and Clinical Laboratory Technologists	2	1	3
Medical Assistants	1	2	3
Licensed Practical and Licensed Vocational Nurses	1	1	2
Occupational Therapists	2		2
Personal Care Aides	1	1	2
Physical Therapist Assistant	2		2
Physicians and Surgeons, All Other	1	1	2
Social Worker		2	2
Radiologic Technologists	1	1	2
Anesthesiologists	1		1
Audiologists	1		1
Dietitians and Nutritionists	1		1
Family and General Practitioners	1		1
Health Technologists and Technicians, All Other	1		1
Mental Health Counselor		1	1
Nurse Anesthetists	1		1
Ophthalmic Medical Technicians	1		1
Pharmacists	1		1
Pharmacy Technicians	1		1
Phlebotomists	1		1
Speech-Language Pathologists	1		1
Surgeons	1		1
Surgical Technologist	1		1

Table 3. Ranking of Top Need Professions Based on Workforce Reports and Key

Informant Interviews

Qualitative Themes	Quotes
In-house Training Programs	"we can train them to be a home health aide......So we give specific training, but the general training is about a three day training."
	"In fact, in our organization, one thing we created with no taking names from anybody else is called XXXXXX University. The concept is education on the job, meaning how to continue to educate workforce moving forward."
	school and we have created a program so that we can actually have an individual who is brand new out of school come in, work on the med surg for a good two years with an educator so that they have assistance if they have questions or challenges they have someone to ask. So it's been very helpful to bring in brand new grads, the challenge is marrying that with experienced individuals and hiring experienced individuals in the nursing degree"
	"Then they look at going to a residency for OB or maybe OR and they go through a whole intership process so they can apply for and then if accepted in that internship process and learning and then hired after their internship."
Internal Development and Promotion of Employees	"We have been able to take talented people who have been in the company with experience at a lower level and than make them health care administrators from a licensed health agency."
	"We try to fill our needs from inter so that we can bridge these people over."
Regulation	"because of all the regulations that exist today and more to come"
	"So, January 1st 2019, a few days ago, we started new regulations for CMS. And those are unavoidable, I mean, without fighters, we have to comply to that. So now I have to mark and I have to put the X in a particular box, in a particular time, in a particular day."
Aging Population	"The aging population is challenging, we have sicker patients, and it can be physically challenging job for the older workforce."
Specialty Training-OR, Cardiac, ER, OB-GYN, Psychology, Social Work	"They help us with certain patients, before we even get involved to get the things ready, because the scarcity of, particularly, specifically nurses."
	"Our greatest needs is nurses with speciality experience....all types ER, OR, labor & delivery"
	"We're doing pretty well with our medical staff right now, but psychiatrists and advanced nurse practitioners certified in psychiatry are a significant challenge regularly."
Health care workers practicing at the top of their license	"And we've pushed skills that only our RN"S could do down to LPNs now.....those LPN skills back then are now being done by home health aids or CNA's"
	...because the scarcity of, particularly, specifically nurses....We have to be able to apply again to the maxiumum of their license training."
	"You see more and more people are looking at what's the highest level of their licensure of their licensure, so let's maximize to that level and not go beyond that, so we can really arrange some of the cost and you having the numbers that we have anyways and it's about fifty percent less costly they have an ARNP."
Home Care	"Now in the hospital the individual has no control over who's on the next shift to take care of me. But the client should have in their own home have a lot of control."
	"So what if I can help the patient through the contiuum of care be as much in the home other than the hospital, that is for multiple reasons. Because it is better for the patient, because it is safter to the patient, because it's less costly, and because it's been more logical based."
	"Most times people can stay home even with their health condition if they have help. They have to agree to the cost of it and many people, more people than ever in the next 5, 10, 15, 20 years are going to use home care."
Patient Centered Care	"So we get together, our center is the patient, our goal today and forevermore is the patient's own."
	"Patient-centric, so we go patient-centric on everything that we do and we say: What are the goals of each one of the team members toward that patient?"
Technology	"Then we complement it with technology. So, we're embedding telemetry in all these actions. We do teleconferencing with the patient, we have telehealth, and we also have the abilitiy to communicate with a home health agency that that delivers that, so we can, let's say from congestive heart failure and with the person looking to gain two pounds, with scales connected to Bluetooth sensors can deploy immediate intervention."
Alzheimer's Training	"I'm sure a nurse's license is the same way, but they all have to go through a statewide course on Alzheimer's training"
	"A spouse is healthy and caring for his or her spouse with dementia or Alzheimer's. All of a sudden, the healthy one has to go to the hospital. So what happens? The wheels fall off totally and we live in a place in Florida where kids are often up north and they aren't in the area to step in."
	"We need more and more good training for Alzheimers and we do that as an agency because our folks need it and because senor need it. And that hopefully gives a caregiver a bag of tricks, proven things that can be done to help an individual get redirected.
Cost of Living/Affordable Housing for Workforce	"They get their degree and stay a year move somewhere else less expensive. It is a problem, the high cost of living and lack of affordable housing."
Empathy Training	"So we are challenged with everyday because we have CAN who comes in and they look like they will be good but they lack empathy. So it is even with this generation than one that is typically right now in high school or just graduating, they lack empathy. They don't know what it is. And so it's going in and talking to the schools and going and talking to the medical academies about empathy and actually providing them with our empathy training that we have at the hospital so that we can actually hire CNAs that are coming out of high school who actually have that skill."
Value Based	"a resident physician that just graduated, may not have exposure to I think, what is your base, fee-for-service versus value based"
	"So, we have deployed, as you know, as one of the transitions and this I believe is unavoidable, that we move on a value-based model more and more."
Cost containment	"But the idea that all health care is moved toward the numbers kind of system, home care doesn't have to be that way."
	"Health care is driven by numbers now. The doctor has to see so many Medicare patients because he doesn't get much money and the cost of taking care of Medicare patients is very high because of all the paperwork."
	"So, I think, more and more as healthcare needs to look at how to increase outcomes but at the same time decrese cost."

Table 4. Qualitative Themes

Table 4 above highlights themes that surfaced during the *Key Informant Interviews*. A couple of topics that were closely linked to education which were most frequently discussed were that the employers had developed in-house training programs, they hand-picked employees that expressed an interest to move up the ladder to more advanced occupations and further their education versus hiring from the outside, and last, the need for specialty training. Many of the other themes were consistent with national trends such as the impact of regulation, the aging population, home care, and patient-centered care.

CHAPTER V
DISCUSSION OF RESULTS

The national health care trends of an increasingly aging population, increasing

service delivery venues, a more patient-centered focus on care delivery, reimbursement

based on value over volume, and cost containment are all part of the health care

landscape in Southwest Florida.   The economic forecasts exhibit a shift in the ethnic-race

demographics from predominately white to almost half of the population Hispanic-Latino

by 2050. Unemployment is expected to continue to decrease with most households in

Southwest Florida commanding money incomes exceeding $60,000. Economic

projections indicate Health Care and Social Assistance will increase as an important

industry sector in both in terms of dollars earned and the number of jobs.

These factors create demand for many health care professions and opportunities

for educators to develop the desperately needed health care workforce.   Workforce

reports and community feedback indicate a high need for nurse practitioners and

physician assistants, nursing assistants and home health aides, diagnostic medical

sonographers, physical therapists, and registered nurses. Additionally, employers are

seeking specialty care training such as acute care, obstetrics, psychiatric, and emergency

room. There is also desirable specialized training such as Alzheimer's, empathy, and

general health education for residents to live healthier lives.

The educational institutions have the opportunity to develop a variety of degree

and certification programs that would elevate health care students to be workforce ready.

In terms of how educational institutions prepare for the health care workforce of the

future, there were a few significant themes. First, an interesting point from the *Key*

Informant Interviews was the fact all venues had created internal programs to compensate

for shortcomings in the new graduates they were hiring. Some of the internal programs

were months, whereas others were even years. The interviewees expressed deficiencies

from soft skills such as lack of empathy to specific specialty training or the current

standard of care practices. The communication with the various employers highlighted

the importance of ongoing dialog between colleges and businesses to ensure that the

educational programs being offered are remaining relevant to current times instead of

continuing as they always have in the past. In the end, it is not only crucial for

educational institutions to be aware of occupations needed, but also to thoroughly

understand the knowledge and skills each profession needs to be workforce ready.

 The occupation that ranked first in the between the workforce reports and the *Key*

Informant Interviews was Nurse Practitioner (NP). NPs work in a variety of clinical

settings as depicted in Figure 28. The study has indicated that there are a variety of

specialty settings that need NPs such as the mental health facility noted in the *Key*

Informant Interview it was seeking NPs with certification in psychiatry (American

Association of Nurse Practitioners [AANP], 2019. The Consensus Model for APRN

Regulation: Licensure, Accreditation, Certification, and Education was developed by the

American Nurses Credentialing Center (ANCC) in 2008. The model has set the standard

for the primary certification and then the scope of practice based on specialization in the

top clinical foci. The Board of Nursing of each state has a scope of practice guidelines;

however, the ultimate authority would be granted by the facility during the credentialing

process whereby education and experience of the NP would be evaluated (Hoyt & Proel, 2015).

Certification*	Percent of NPs	Top Practice Setting	Top Clinical Foci
Family^	66.9	Hospital Outpatient Clinic (13.5%)	Primary Care (37.7%)
Adult^	12.0	Hospital Outpatient Clinic (17.9%)	Primary Care (17.4%)
Adult–Gerontology Primary Care^	6.0	Hospital Outpatient Cinic (14.4%)	Primary Care (25.5%)
Acute Care	4.8	Hospital Inpatient Unit (50.8%)	Cardiology (16.9%)
Pediatrics–Primary Care^	4.0	Hospital Outpatient Clinic (31.1%)	Primary Care (51.6%)
Adult–Gerontology Acute Care	3.1	Hospital Inpatient Unit (53.6%)	Critical Care (16.4%)
Women's Health^	2.7	Private Group Practice (23.6%)	OB/GYN (66.5%)
Psychiatric/Mental Health–Family	2.1	Psych/Mental Health Facility (24.2%)	Psychiatric (67.6%)
Psychiatric/Mental Health	2.0	Psych/Mental Health Facility (28.7%)	Psychiatric (66.2%)
Gerontology^	1.8	Long-Term Care Facility (20.5%)	Primary Care (31.4%)

Figure 28. Distribution, Top Practice Setting and Clinical Focus Area by Area of NP Certification

Source: https://www.aanp.org/about/all-about-nps/np-fact-sheet

Two universities are offering a Family Nurse Practitioner program. There is an opportunity to partner with the local employers to develop graduate certification programs or fellowship programs to meet their needs with the additional education and skills to work in specialty practice environments such as the much needed Psychiatric/Mental Health certification or the Adult-Gerontology Acute Care certification.

Limitations of the Present Study

The first limitation is that the author's organization collected the *Key Informant Interviews* through her job. Another limitation is the small sample size of the *Key Informant Interviews*. However, since the processes involve significant interaction with

the participants, a small sample is more acceptable when compared to a quantitative

analysis utilizing large volumes of data (Oun & Bach, 2014).

Additionally, online programs are not considered. However, most online

programs will not be targeted or customized to meet specific community needs even

though they serve a valuable purpose in delivering education to the population at

large. Also, all institutions included in the study have an online presence in addition to

the face-to-face instruction.

Future Research

Additional research could include the impact of affordable housing on the

workforce in Collier County and the potential strain it could impose on retaining the

future health care workforce especially at the lower income levels such as home health

aides. Another issue not addressed in this study was the impact of technology and

although it may not reduce cost, will it reduce the number of health care workers will be

needed.

Conclusion

The economic trends out to 2050 indicate that many of the current trends continue

in both Collier and Lee Counties. This study suggests the population is aging at a rapid

pace and that health care services will continue to increase through 2050.   The

demographics are also changing, and a population that was predominately White Non-

Hispanic will be half Hispanic-Latino. Unemployment is expected to continue to

decrease, which will make market demand higher for health care workers. The

educational institutions need greater communication with employers and to develop

curricula at all levels from certificate through doctorate that will better prepare the health

care students to be workforce ready. There is an intense desire and apparent deficiency for health care workers that have specialty training. A more closely linked partnership between health care employers and educational institutions will ensure that future health care education is more specific to the knowledge and skills required for the job such as Nurse Practitioners.

References

American Association of Nurse Practitioners. (2019). NP Facts [Fact Sheet]. Retrieved

from https://storage.aanp.org/www/documents/Npfacts.pdf

Auerbach, D. I. (2012, July). Will the NP workforce grow in the future? New forecasts

and implications for healthcare delivery. *Medical Care*, *50*(7), 606-610. Retrieved

from www.lww-medicalcare.com

Centers for Medicare and Medicaid. (2017). *National health expenditures 2017 highlights*

[Fact Sheet]. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-

Systems/Statistics-Trends-and-

Reports/NationalHealthExpendData/Downloads/highlights.pdf

Collier County Growth Management Department, Comprehensive Planning Section.

(2016). The 2016 Collier County Economic, Demographic & Community Profile.

Retrieved from https://ww.colliercountyfl.gov/home/showdocument?id=69452

Commins, J. (2018). *Healthcare spending at 20% of GDP? That's an economy-wide*

problem. Retrieved from HealthLeaders Media website:

https://www.healthleadersmedia.com/finance/healthcare-spending-20-gdp-thats-

economy-wide-problem

Data USA. (n.d.). https://datausa.io/

Florida Department of Economic Opportunity. (2018). *Workforce statistics data* [Graph

illustration]. Retrieved from

http://lmsresources.labormarketinfo.com/labor_supply/index.html

Florida Department of Health-Collier County. (2019). *Collier County Community Health*

Improvement Plan. Retrieved from http://collier.floridahealth.gov/programs-and-

services/community-health-planning-and-statistics/public-health-

information/_documents/communityhealthimprovement.pdf

Florida Gulf Coast University. (n.d.). https://www.fgcu.edu

Florida Health Collier County. (2016). *Collier County Community Health Assessment*.

Retrieved from http://collier.floridahealth.gov/programs-and-services/community-

health-planning-and-statistics/public-health-

information/_documents/communityhealthassessmentsum.pdf

Florida SouthWestern State College. (n.d.). https://www.fsw.edu/academics/programs

FutureMakers Coalition. (n.d.). FutureMakers Coalition drives student success through

partnership and scholarship innovation. Retrieved from

http://floridacollegeaccess.org/wp-

content/uploads/2018/10/fmccasestudyvectorlogo.pdf

Hodges University-Academics. (n.d.). https://www.hodges.edu/academics/

Jackson, G., Meyer, J., & Timur, A. (2013). Three major employers in SW

Florida: Identification of critical position/skill gaps [Immersion Report].

Retrieved: https://webadvisor.hodges.edu/aa_pdfs/WorkforceNow-IR-2013.pdf

Hoyt, K. S. & Proehl, J. A. (2015). Family Nurse Practitioner or Acute Care Nurse

Practitioner in the Emergency Department?. Advanced Emergency Nursing

Journal, 37(4), 243–246. doi: 10.1097/TME.0000000000000084.

Keiser University. (2018). https://www.keiseruniversity.edu/program-directory/

Kellermann, A. L., Saultz, J. W., Mehrotra, A., Jones, S. S., & Dalal, S. (2013,

November). Primary care technicians: A solution to the primary care workforce

gap. *Health Affairs*, *32*(11), 1893-1898.

http://dx.doi.org/10.1377/hlthaff.2013.0481

Lee Health fast facts. (2018). Retrieved November 20, 2018, from

http://www.leehealth.org/about/fast-facts.asp

Mental health-David Lawrence. (2018). Retrieved from

https://collieronecenttax.com/mental-health

Narlock, J., & Stevenson, M. (2016). *Healthcare workforce 2025: Part II* [Lecture notes].

Retrieved from

https://www.imercer.com/uploads/Global/us%20healthcare%20report%20five%2

0states.pdf?WT.mc_id=A000436

NCH Healthcare System. (2016). *Community needs assessment*. Retrieved from

https://nchmd6-px.personalservices.biz/docs/default-source/documents/annual-

reports/health-needs-assessment/community-health-needs-assessment---full-

document.pdf?sfvrsn=977bd475_4

Nova Southeastern University-Fort Myers, Florida. (n.d.).

https://www.nova.edu/campuses/fortmyers/index.html

Oun, M. A., & Bach, C. (2014, December). Qualitative research method summary.

Journal of Multidisciplinary Engineering Science and Technology, *1*(5), 252-258.

Retrieved from http://www.jmest.org/wp-content/uploads/JMESTN42350250.pdf

Petterson, S. M., Cai, A., Moore, M., & Bazemore, A. (2013). *Florida: Projecting

primary care physician workforce*. Washington, D.C.: Robert Graham Center.

Pianin, E. [The fiscaltimes]. (2017, May 9). 10,000 boomers turn 65 every day. Can

Medicare and social security handle it? [Blog post]. Retrieved from

http://www.thefiscaltimes.com/2017/05/09/10000-Boomers-Turn-65-Every-Day-

Can-Medicare-and-Social-Security-Handle-It

Professional Research Consultants, Inc. (2017). *2017 community health needs assessment

report*. Retrieved from

http://www.leecounty.healthforecast.net/2017%20PRC%20CHNA%20Report%2

0-%20Lee%20County,%20FL.pdf

Prudential. (n.d.). *The 80-year-old millennial*. Retrieved from

https://80yearoldmillennial.pru/version/1520695135847/static/pdf/The-80-YEAR-

OLD-Millennial.pdf

Q-Q Research Consultants. (2018). *Collier County: Community needs and assets

assessment*. Retrieved from www.schulzefamilyfoundation.org:

https://www.schulzefamilyfoundation.org/_asset/y2r4yx/RMSFF-Executive-

Summary.pdf

Rasmussen College. (n.d.). https://www.rasmussen.edu/locations/florida/fort-myers/

Reno, J. (2016, 08/08). Baby boomers changing the healthcare landscape [Blog post].

Retrieved from https://www.healthline.com/health-news/baby-boomers-changing-

healthcare-landscape#1

Stevenson, M. (2018). *Demand for healthcare workers will outpace supply by 2025: An

analysis of the US healthcare labor market*. Retrieved from www.mercer.us:

https://www.mercer.us/our-thinking/career/workforce-for-the-future/demand-for-

healthcare-workers-will-outpace-supply-by-2025.html

Tomorrow's health care workplace. (2014, Mar). *Trustee, 67*(3), 19-23. Retrieved from

https://www.trusteemag.com/articles/42-tomorrows-health-care-workplace

US Bureau of Labor Statistics. (2018). *Fastest growing occupations, 2016 and projected*

   2026 [Graph illustration]. Retrieved from https://www.bls.gov/emp/#tables

Westley, C., Timur, A., & Psihountas, D. (2018). *Southwest Florida workforce overview*

   study 2018. Retrieved from Workforce Now:

   https://www2.fgcu.edu/CoB/Reri/files/wfn2018.pdf

Woods & Poole Economics, Inc. (2018). *2018 Data Pamphlet-Collier County*.

   [Download].

Woods & Poole Economics, Inc. (2018). *2018 Data Pamphlet-Lee County*.

   [Download].

APPENDICES

Appendix I: Program Comparative Analysis (As of November, 2018)

Certificate Programs

Keiser	Florida Gulf Coast University		Floria SouthWestern State College		Hodges University		Nova Southeastern University-Fort Myers		Rasmussen College	
Certificate	Certificate		Certificate		Certificate		Certificate		Certificate	
	Clinical Laboratory Science	Cert	Addiction Services	Cert						
			Emergency Medical Technician	Cert						
	Health Services Administration	Cert								
									Medical Adminstrative Assistant	Cert
			Medical Information Coder/Biller	Cert					Medical Billing and Coding	Cert
									Medical Assisting	Diploma
			Paramedic	Cert						
									Practical Nursing	Diploma
									Pharmacy Technician	Cert
			Fire Fighter I/II	Cert						
Advanced Technical Certificate	Advanced Technical Certificate		Advanced Technical Certificate		Advanced Technical Certificate		Advanced Technical Certificate		Advanced Technical Certificate	
			Computed Tomography	ATC						

Source:

https://www.keiseruniversity.edu/program-directory/
https://www.fgcu.edu
https://www.fsw.edu/academics/programs
https://www.hodges.edu/academics/
https://www.nova.edu/campuses/fortmyers/index.html
https://www.rasmussen.edu/locations/florida/fort-myers/

Associate Programs

Keiser	Florida Gulf Coast University	Floria SouthWestern State College	Hodges University	Nova Southeastern University-Fort Myers	Rasmussen College
Associate	Associate	Associate	Associate	Associate	Associate
		Cardiovascular Technology AS			
		Dental Hygiene AS			
		Emergency Medical Services Technology AS	Emergency Medical Services AS		
		Fire Science Technology AS			
Diagnostic Medical Sonography (Concentration in General Sonography) AS					
Diagnostic Medical Sonography (Concentration in General and Vascular Sonography) AS					
			Healthcare Office Administration AS		Healthcare (Medical Adminstrative Assistant, Pharmacy Technician, or Medical Assisting) AS
Health Information Management AS		Health Information Technology AS			Health Information Management AS
			Health Sciences AS		
Health Services Administration AA					
					Human Services AS
Histotechnology AS					
Massage Therapy AS					
Medical Adminstrative Billing and Coding AS					
Medical Administrative Billing and Coding (Spanish) AS					
Medical Assisting AS					
Medical Assisting Science AS					
Medical Assisting Science (Spanish) AS					
Medical Laboratory Technician AS					Medical Laboratory Technician AS
Nuclear Medicine Technology AS					
Nursing AS		Nursing AS			
Occupational Therapy Assistant AS					
			Pre-Nursing AS		
			Pre-PTA AS		
					Professional Nursing A.D.N.
		Opticianry-partnership program with Hillsborough Community College AS			
		Physical Therapist Assistant-partnership program with Broward College AS	Physical Therapist Assistant AS		Physical Therapist Assistant AS
Radiation Therapy AS					
Radiologic Technology AS		Radiologic Technology AS			Radiologic Technician AS
Respiratory Therapy AS		Respiratory Care AS			
		Social and Human Services AS			
Sports Medicine and Fitness Technology AS					
Surgical Technology AS					Surgical Technologist AS

Source: Listed on page 25

Bachelor Programs

Keiser	Florida Gulf Coast University	Floria SouthWestern State College	Hodges University	Nova Southeastern University-Fort Myers	Rasmussen College
Bachelor	Bachelor	Bachelor	Bachelor	Bachelor	Bachelor
	Athletic Training BS				
		Cardiopulmonary Sciences BS			
	Clinical Laboratory Science BS				
Dietetic and Nutrition BS					
Exercise Science BS	Exercise Science BS				
Health Information Management BS					Health Information Management BS
Health Science BS	Health Science BS		Health Sciences-Biology, Medical, or Physician Assistant BS	Health Science BHSc	
Health Services Administration BA			Health Services Administration BS		
Health Services Administration-Spanish BA					
					Health and Wellness BS
				Human Services Administration BS	Human Services BS
Imaging Sciences (Concentrations in Imaging Administration, or Clinical Imaging) BS					
Medical Laboratory Science BS					
Nursing (Traditional) BSN	Nursing BSN	Nursing BSN	Nursing BSN	Nursing (Entry Level) BSN	
Nursing (FastTrack) BSN					
Nursing (Accelerated) BSN					Nursing (Accelerated) BSN
					Nursing (Accelerated BSN Second Degree) BSN
Nursing (RN to BSN) BSN	Public Health BSPH			Nursing (RN-BSN) BSN	Nursing (RN to BSN) BSN
Psychology (Centrations in Human Services, Developmental Psychology, Health Care and Fitness, and Business) BA			Psychology-Applied BS	Pschology BS	
				Recreational Therapy BS	
				Respiratory Therapy (Completion Program) BSRT	
	Social Work BSW			Speech Language Communications Disorders BS	
Sports Medicine and Fitness Technology BS					

Source: Listed on Page 25

Master Programs

Keiser		Florida Gulf Coast University		Floria SouthWestern State College	Hodges University		Nova Southeastern University-Fort Myers		Rasmussen College	
Master		Master		Master	Master		Master		Master	
							Biomedical Informatics	MSBI		
							Child Protection	MHS		
							Clinical Vision Research	MS		
							Counseling	MS		
							Developmental Disabilities	MS		
							Disaster and Emergency Preparedness	MS		
							Gerontology	MA		
							Health Law	MS		
							Health Sciences	MHSc		
Clinical Mental Health Counseling	MS						Mental Health Counseling	MS		
									Healthcare Administration	MS
		Health Science	MS							
Health Services Administration	MBA									
					Health Services Management	MS				
Nurse Anesthesia	MS	Nurse Anesthesia	MSN							
		Nurse Educator	MSN							
Nursing	MSN						Nursing (RN-MSN)	MSN		
							Nursing	MSN		
Nursing, Family Nurse Practitioner	MSN	Primary Health Care Nurse Practitioner	MSN							
Nutrition with Distance Learning Internship	MS									
Occupational Therapy (Bridge Program)	MS	Occupational Therapy	MS							
Organizational Psychology	MS									
Physician Assistant	MS	Physician Assistant Studies	MPAS				Physician Assistant	MMS		
							Psychology-Forensic	MS		
Psychology	MS						Psychology-General	MS		
							Public Health	MPH		
							Speech-Language Pathology	MS		

Source: Listed on Page 25

Doctorate Programs and Graduate Certificates

Keiser		Florida Gulf Coast University		Floria SouthWestern State College	Hodges University	Nova Southeastern University-Fort Myers		Rasmussen College
Doctorate		**Doctorate**		**Doctorate**	**Doctorate**	**Doctorate**		**Doctorate**
Chiropractic	DC							
Health Science	DHSc					Health Science	DHSc	
						Health Science	PhD	
Industrial and Organizational Psychology	PhD							
Nurse Anesthesia Practice	DNAP							
Nursing Practice	DNP					Nursing	DNP	
						Nursing	PhD	
		BSN to DNP	DNP					
		MSN to DNP	DNP					
						Occupational Therapy-Post Professional	DrOT	
						Occupational Therapy-Post Professional	PhD	
		Physical Therapy	DPT					
Psychology	PhD					Speech-Language Pathology	SLPD	
Graduate Certificate		**Graduate Certificate**		**Graduate Certificate**	**Graduate Certificate**	**Graduate Certificate**		**Graduate Certificate**
Health Services Management	Grad Cert							
		Nurse Educator Certificate	Grad Cert					

Source: Listed on page 25

Appendix II: Fastest Growing Occupations

5 of the 10 Fastest Growing Occupations are Related to Healthcare

	Percent change, projected 2016-26	Employment change, projected 2016-26 (in thousands)	Median annual wages, May 2017
Solar photovoltaic installers	104.9%	11.8	$39,490
Wind turbine service technicians	96.3%	5.6	$53,880
Home health aides	47.3%	431.2	$23,210
Personal care aides	38.6%	777.6	$23,100
Physician assistants	37.3%	39.6	$104,860
Nurse practitioners	36.1%	56.1	$103,880
Statisticians	33.8%	12.6	$84,060
Physical therapist assistants	31.0%	27.4	$57,430
Software developers, applications	30.7%	255.4	$101,790
Mathematicians	29.7%	0.9	$103,010

1 — U.S. BUREAU OF LABOR STATISTICS • **bls.gov**

BLS

Source: https://www.bls.gov/emp/#tables

Appendix III: Targeted Opportunities

Occupations	Offered at Local Universities	Community Needs	Southwest Florida Employment Gap	Supply Gap	Fastest Growing in Southwest Florida	Growth	Gaining the Most Jobs in Southwest Florida	Growth	Growing the Fastest and Most in Florida
Audiologists	No	No	Yes	-13					
Clinical Mental Health Counselor	Yes	Yes							
Dietitians and Nutritionist	Yes		Yes	-14	Yes				
Nurse Pracitioner	Yes	Yes			Yes	132			Yes
Medical and Health Services Managers	Yes	Yes	Yes	-92					Not included in the study
Medical and Clinical Laboratory Technologist	Yes		Yes	-16					Yes
Medical Assistant	Yes								Yes
Occupational Therapists	Yes		Yes	-20					Yes
Pharmacists	No		Yes	-25					
Pharmacy Technicians	No		Yes	-25					
Physical Therapist	Yes								Yes
Physical Therapist Assistant	Yes				Yes	125			Yes
Physician Assistant	Yes	Yes	Yes	-18	Yes	138			Yes
Pyschology-Human Services	Yes	Yes							
Registered Nurse	Yes	Yes					Yes	2191	
Diagnostic Medical Sonographers	Yes				Yes	114			Yes
Speech-Language Pathologists	Yes		Yes	-34					
Surgical Technician	Yes								Yes

Appendix IV: Key Informant Interview Questionnaire

Please describe the most recent urgent employment gaps where it is difficult to find qualified employees.
Please provide an estimate of the size of the employment gap for each critical position or occupation identified and how it is expected to change in the next five years and in ten years.
For the top five urgent employment gaps identified, please describe the responsibilities of each position or occupation, skills, and educational level or certification that you are seeking for that occupation or position.
What actions are currently being undertaken to close the employment gaps? Please describe.
Are there workforce skills that need to be strengthened independent of the particular position or occupation at your company?

Source: Adapted from https://webadvisor.hodges.edu/aa_pdfs/WorkforceNow-IR-2013.pdf