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State University System of Florida

Gap Analysis for Health Occupations: Methods and Initial Figures

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Gap Analysis: Workshop Agenda

Part 1.

Background and Purpose

Part 2.

Which Health Occupations are Undersupplied?

- Gap Analysis Methodology
- Initial Figures

Part 3.

Which Health Occupations are Emerging or Evolving?

- Identifying Demand Shifts
- Three Professional Practice Doctorates



Part 1. Background and Purpose

The Health Initiatives Committee year-long three-pronged Environmental Scan:

1. Health Care Delivery
2. Health-related Research
3. Health Programs and Workforce Demand



Part 2. Which Occupations are Undersupplied?

The Initial Steps

Follows gap analysis methods established by the Commission on Higher Education Access and Attainment

Additional Steps are Still Necessary



Introduction to the Commission's Gap Analysis





Gap Analysis Methodology: Supply



- **SOURCE:** Supply is based on 2012-13 degrees awarded data as reported by 402 Florida institutions to the National Center for Education Statistics.
- **PRIOR LIMITATION:** The Commission's methodology includes all graduates, including those who left Florida. Since the Commission's work, additional data has become available to estimate out-migration.
- **LIMITATION:** The methodology currently does not include any consideration of occupational in-migration, occupational retention, and attrition.



Supply: U.S. Dept. of Education CIP Codes Explained

The Classification of Instructional Programs (CIP) taxonomy is organized on three levels: 1) the two-digit series, 2) the four-digit series, and 3) the six-digit series. Postsecondary educational institutions use six-digit CIP codes when completing the Integrated Postsecondary Education Data System (IPEDS) Completions Survey.

EXAMPLE:

51-0000 Health Professions and Related Programs

51-1200 Medicine

51-1201 Medicine (Medical School)

51-1400 Medical Clinical Sciences/Graduate Medical Studies

51-1401 Medical Scientist



Gap Analysis Methodology: Demand



- **SOURCE:** Demand is based on the long-term (2014-2022) occupational employment projections of annual job openings (growth and replacements) by the Florida Department of Economic Opportunity (DEO) Labor Market Statistics Center.
- **KEY DECISION:** Previously, the Commission on Access and Attainment agreed that the educational attainment levels for the occupational data would be based on the Bureau of Labor Statistics (BLS) national taxonomy of educational levels.



Demand: U.S. Dept. of Labor SOC Codes Explained

Standard Occupational Classification and Coding Structure

To suit the needs of various data users, the occupations in the SOC are classified at four levels of aggregation: major group, minor group, broad occupation, and detailed occupation. Each lower level of detail identifies a more specific group of occupations.

EXAMPLE:

29-0000 Healthcare Practitioners and Technical Occupations

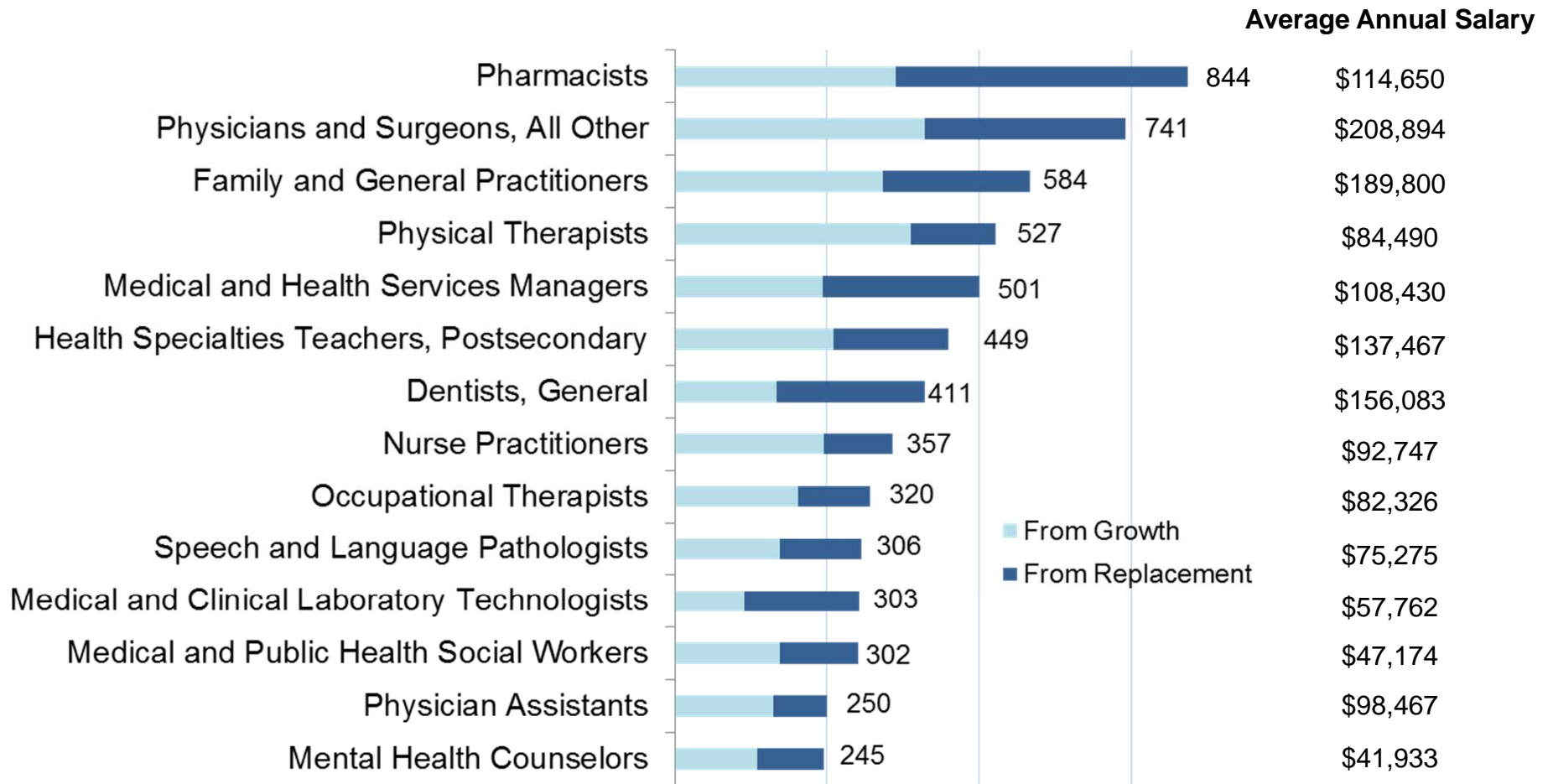
 29-1000 Health Diagnosing and Treating Practitioners

 29-1060 Physicians and Surgeons

 29-1062 Family and General Practitioners



Demand: Annual Average Occupational Openings by Specific Health-Related Occupation



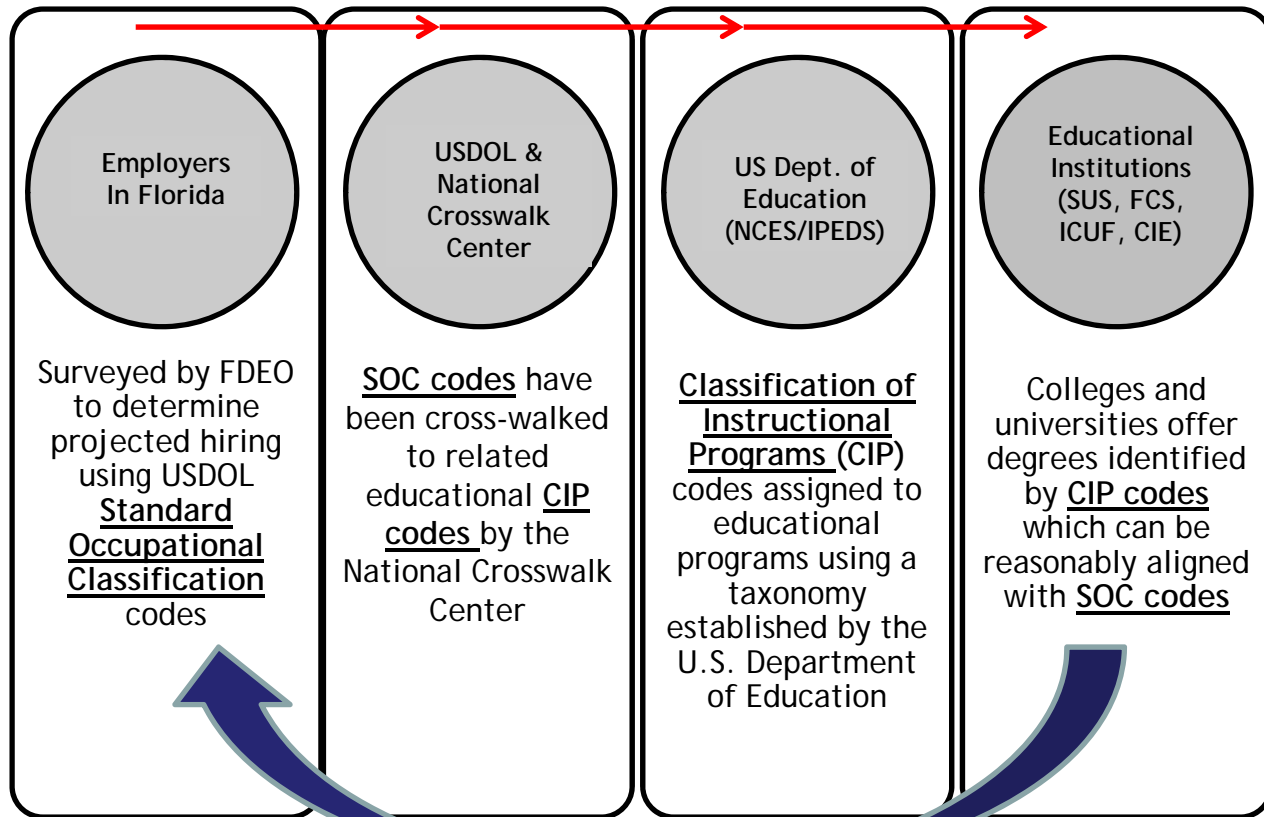
Source: Data from the Dept. of Economic Opportunity, Labor Market Statistics Ctr., Employment Projections Program, Forecast to 2022, released Sept.2014. NOTE: Data graphed and rounded by FL Board of Governors.



Gap Analysis: Relating Demand and Supply



DEMAND



SUPPLY



Gap Analysis: A Sample of Initial Figures

Occupation	Annual Demand	Adjusted Supply	Initial Difference	Needs Additional Steps
Physicians	1,934	975	-959	✓
Physical Therapists	527	340	-187	✓
Dentists	511	205	-306	✓
Occupational Therapists	320	215	-105	✓
Medical Technologists	303	74	-229	
Medical and Public Health Social Workers	302	184	-118	
Veterinarians	162	94	-68	



Gap Analysis Methodology: Contextual Metrics



- Average Wage ✓
- Projected 2014-2022 Annual Growth Rates ✓
- Completions from Florida Residency and Internship Programs
(When Required for Licensing or Credentialing)
- Number of Graduates from Post-Professional Programs
- Estimates of Supply from New and Planned Programs
- Estimates of In- and Out-Migration
- Practice Patterns from Licensing Data and Surveys
- Additional Models of Healthcare Demand



Today's Discussion of Specific Health Occupations

Discuss Handout on 18 Occupation Groups

Generally Discuss Demand and Supply Issues
for Nursing



Discussion Questions for Part 2. Which Health Occupations are Undersupplied?

1. Are the methods and data we've considered up to this point appropriate for answering our environmental scan question?
2. What are the priority contextual factors to consider next?
3. Once we answer the undersupply question, should we gather data on the cost and quality of programs that may need to grow? Is that part of an implementation plan to come later?



Part 3. Which Health Occupations are Emerging or Evolving?

Emerging Occupations: newly forming occupations in which new skills and competencies in the workforce are becoming formally recognized

Potentially Occupational Health and Safety Specialists, Epidemiologists, Audiologists, and Genetic Counselors

Evolving Occupations: occupations that currently exist but are being redefined by changes in necessary skills and competencies

Potentially Dietitians and Nutritionists, Occupational Therapists, Nurse Practitioners, and Physician Assistants



Professional Practice Doctorates for *Potentially* Evolving Occupations

The Issue

Need to determine demand for programs where the degree proposed is higher than the typical education level for a given occupation

Proposals for March 2015

Doctorate in Clinical Nutrition at UNF

Doctor of Social Work (Clinical/Medical Specialty) at FAU

Doctor of Nursing Practice at FGCU



Discussion Questions for Part 3. Which Occupations are Emerging or Evolving?

1. Can we identify evolving or emerging health occupations from those considered in the gap analysis? Have we left out any emerging occupations?
2. For the professional practice doctorates, is there evidence that graduates of these programs will benefit from **a hiring preference, promotion potential, or higher earnings**?
3. Are changes in the practice environment driving the transition to a higher credential? What are other drivers of credential change?
4. Are the proposed programs likely to enroll students and be sustainable? If the market demand remains small, will the market become saturated quickly even in the presence of high student demand?



Dietitians and Nutritionists

See Handout



Medical and Public Health Social Workers

See Handout



The MSN to DNP Transition

Number of Graduates by Program for Academic Year 2012-2013 as Reported on the Florida Center for Nursing Annual Survey

School Name	MSN – Nurse Practitioner	MSN – Nurse Educator	MSN – Nurse Leadership	MSN – Clinical Nurse Specialist	MSN – Certified Registered Nurse Anesthetist	MSN – Nurse Midwife	Doctoral - PhD	Doctoral - DNP
FGCU	9	--	--	--	14	--	--	--
UWF	--	1	--	--	--	--	--	--
USF	140	36	--	--	16	--	10	5
FAU	89	22	23	--	--	--	4	14
UCF	7	26	37	1	--	--	9	3
UF	59	--	--	--	--	8	6	46
FIU	141	--	--	--	38	--	1	--
FSU	--	4	--	--	--	--	--	15
UNF	21	--	--	2	27	--	--	5
FAMU	11	--	--	--	--	--	--	--
TOTAL	477	89	60	3	95	8	30	88

Source: Florida Center for Nursing, Nurse Education Program Survey Results, Academic Year 2012-2013



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Supply: Top Degrees Awarded in Florida (in 2012-2013) By Discipline Groups and Degree Level

ACADEMIC DISCIPLINE GROUPS	ASSOCIATE'S	BACHELOR'S	MASTER'S	DOCTORAL & PROF.	TOTAL
STATE TOTAL	100,910	98,358	32,944	9,028	241,240
BUSINESS, MANAGEMENT, MARKETING, SUPPORT SERVS.	4,300	23,711	11,024	121	39,156
HEALTH PROFESSIONS AND RELATED PROGRAMS	21,168	9,880	4,599	2,870	38,517
EDUCATION	473	5,346	4,331	850	11,000
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	3,469	4,604	774	*	8,852
SOCIAL SCIENCES	*	8,153	540	110	8,803
PSYCHOLOGY	*	6,626	1,175	353	8,164
VISUAL AND PERFORMING ARTS	952	5,246	725	72	6,995
ENGINEERING	*	4,066	2,108	407	6,589
BIOLOGICAL AND BIOMEDICAL SCIENCES	72	4,985	863	256	6,176
COMPUTER AND INFORMATION SCIENCES	2,657	2,703	589	99	6,048
LEGAL PROFESSIONS AND STUDIES	1,485	771	324	3,207	5,787
COMMUNICATION, JOURNALISM, & RELATED PROGRAMS	14	4,043	415	24	4,496
TRANSPORTATION AND MATERIALS MOVING	664	1,827	1,221	*	3,712
PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONALS	35	1,388	1,422	31	2,876
ALL OTHERS ¹	65,603	15,009	2,834	623	84,069

Note 1: All Others include 61,221 Associate's degrees assigned to 'General Studies' . Note 2: An asterisk (*) indicates ten or fewer.



Gap Analysis: Step 1 of the CIP-SOC Crosswalk

1st step: Identify the 6-Digit SOC/CIP relationships

SOC Titles & Codes	Medical Scientists, except Epidemiologists (19-1042)	Dentists, General (29-1021)	Family and General Practitioners (29-1062)
Associated Degree CIP Codes	26.0102	51.0401	51.1201
	26.0202		51.1901
	26.0401	CIP codes in RED are associated with more than one SOC code.	
	26.0503		
	26.0806		
	26.0901		
	26.0908		
	26.0911		
	26.1001		
	26.1102		
	26.1309		
	30.1101		



Gap Analysis: Step 2 of the CIP-SOC Crosswalk

2nd step: Adjust the supply

In an effort to limit the problem of overstating supply due to occupations being linked to multiple academic disciplines, the supply data was adjusted to only count the target occupation's share of job openings available for qualified graduates.

SOC	CIP	SOC	
FINANCIAL ANALYST	Accounting and Finance	Financial Managers	530
		Accountants and Auditors	3,237
		Budget Analysts	104
		Financial Analysts	326
	Accounting and Business Management	Financial Managers	530
		Accountants and Auditors	3,237
		Financial Analysts	326
	Finance, General	Chief Executives	660
		Financial Managers	530
		Budget Analysts	104
		Credit Analysts	124
		Financial Analysts	326
		Personal Financial Advisors	575
Financial Specialists, All Other		275	
326 OPENINGS	3,093 BACHELOR'S	4,641 NON-MANAGER OPENINGS	

ADJUSTED SUPPLY
 In this example, only 7% of the total supply (3,093 graduates) is used in the gap analysis because the Financial Analysts only comprise 7% of the 4,641 non-managerial jobs available to these graduates. **So, the adjusted supply is 3,093 x .07 = 217.**