SCDEW & CCWD Updates

June 20th, 2024

Erica Von Nessen, Ph.D.

Justin Williams, Ph.D.

Sophia Casler

Agenda

- Agency updates
  - Introductions
  - Act 67 of 2023
    - Return-on-Investment Analysis & Data Sharing
    - BLS Wage Records Pilot
    - Standard Occupation Code and Hours Worked
  - ROI Spotlight
  - Nursing Analysis
  - Availability of one pagers
  - Q&A

Agency Updates

Introductions

- DEW Presenters
  - **Erica Von Nessen, Ph.D.** – Research Economist
  - **Justin Williams, Ph.D.** – Analytics Coordinator-LMI
  - **Sophia Casler** – Longitudinal Analyst-LMI

Workforce Analyst Contacts in LMI

LABOR MARKET INFORMATION

SOUTH CAROLINA DEPARTMENT OF Employment and Workforce

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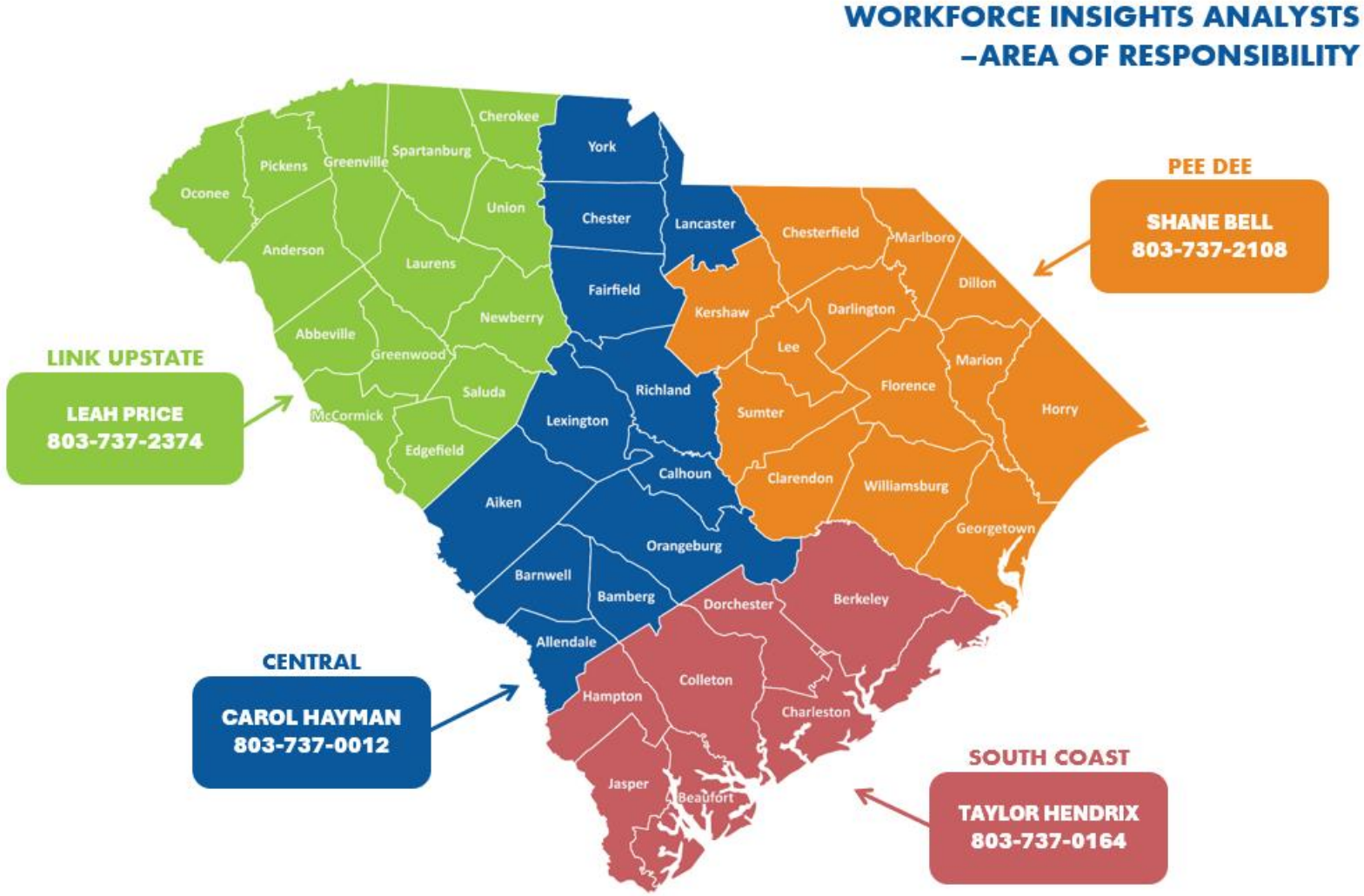


SOUTH CAROLINA DEPARTMENT OF Employment and Workforce

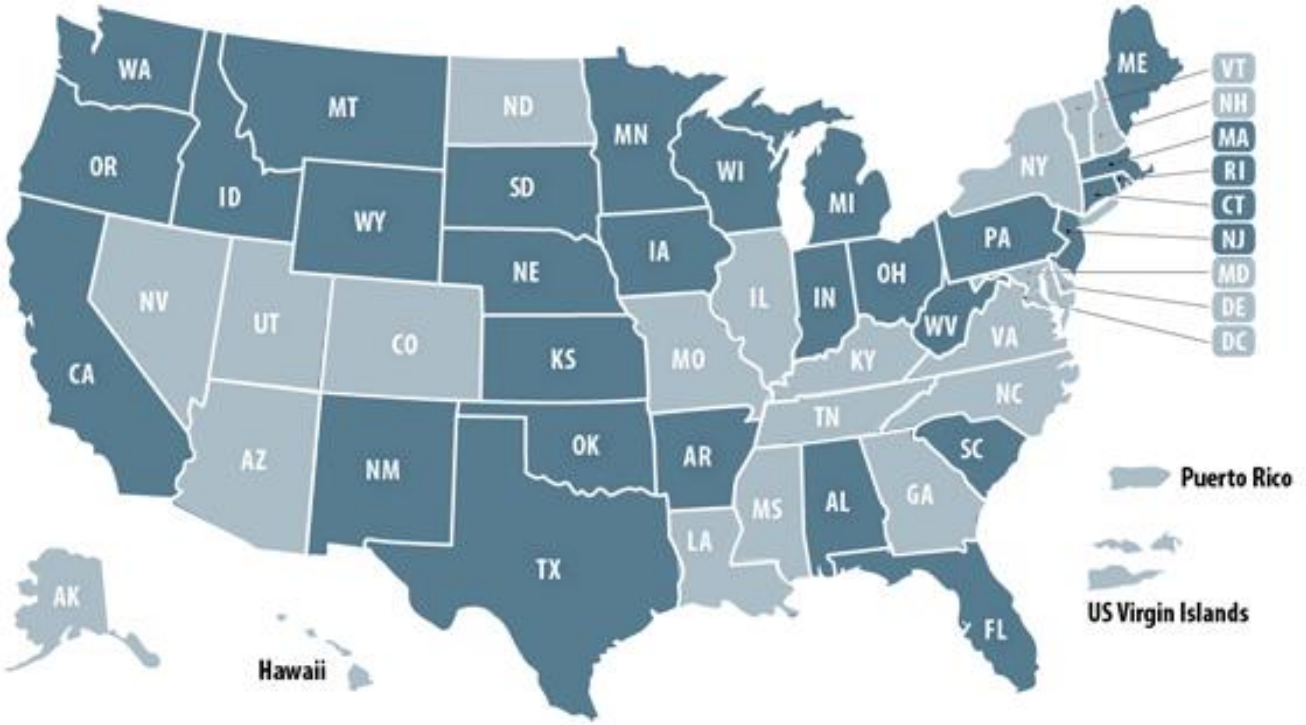
Act 67 of 2023

- The Statewide Education and Workforce Development Act
  - Passed June 2023
  - Expanded CCWD membership
  - Outlines specific data-related deliverables including:
    - Return-on-Investment (ROI) analysis of the state's education and workforce programs
    - Supply Gap analysis
    - Collecting Standard Occupational Classification (SOC) codes and hours worked in quarterly wage records

ROI Analysis

- Currently working with Commission on Higher Education & State Technical College System to obtain data for analysis on:
    - CHE - Five bachelor's degree programs:
        - Business/Logistics
        - Computers/IT
        - Engineering
        - Nursing
        - Teaching
    - State Tech - Four programs:
        - Machine Tool & CNC
        - Mechatronics
        - Nursing
        - Welding

BLS Wage Record Pilot



- 29 states participating including South Carolina
  - Only 3 in the Southeast
- Future possibility of matching individual records with wages in participating states
- DEW working with BLS to develop a wage dashboard using pilot data

Shareable Wage Dashboard

- DEW LMI was given a grant from the BLS to build a shareable wage dashboard
  - Goal: To make a dashboard to visualize summary data of wages from participating States in the BLS Wage
  - Currently, we are identifying data sources and exploring how best to visualize this data
  - In the near future we will be talking to Stakeholders about how to show these data and what uses they anticipate for this project

SOC Codes: Background

- Due to new legislation(Act 67), we are now collecting SOC codes from every employer in South Carolina

- The Standard Occupational Classification (SOC) System was developed in response to a growing need for a universal occupational classification system. Such a classification system allows government agencies and private industry to produce comparable data

- There are 23 major groups (two digit) 96 minor groups (four digit), 449 broad occupations (five digit), and 821 detailed occupations (six digit)

SOC Codes: Examples

May 2023 Occupation Profiles

Major groups

- 00-0000 All Occupations
- 11-0000 Management Occupations
- 13-0000 Business and Financial Operations Occupations
- 15-0000 Computer and Mathematical Occupations
- 17-0000 Architecture and Engineering Occupations
- 19-0000 Life, Physical, and Social Science Occupations
- 21-0000 Community and Social Service Occupations
- 23-0000 Legal Occupations
- 25-0000 Educational Instruction and Library Occupations
- 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
- 29-0000 Healthcare Practitioners and Technical Occupations
- 31-0000 Healthcare Support Occupations
- 33-0000 Protective Service Occupations
- 35-0000 Food Preparation and Serving Related Occupations
- 37-0000 Building and Grounds Cleaning and Maintenance Occupations
- 39-0000 Personal Care and Service Occupations
- 41-0000 Sales and Related Occupations
- 43-0000 Office and Administrative Support Occupations
- 45-0000 Farming, Fishing, and Forestry Occupations
- 47-0000 Construction and Extraction Occupations
- 49-0000 Installation, Maintenance, and Repair Occupations
- 51-0000 Production Occupations
- 53-0000 Transportation and Material Moving Occupations

29-0000 Healthcare Practitioners and Technical Occupations

- 29-0000 Healthcare Practitioners and Technical Occupations
  - 29-1000 Healthcare Diagnosing or Treating Practitioners
    - 29-1010 Chiropractors
      - 29-1011 Chiropractors
    - 29-1020 Dentists
      - 29-1021 Dentists, General
      - 29-1022 Oral and Maxillofacial Surgeons
      - 29-1023 Orthodontists
      - 29-1024 Prosthodontists
      - 29-1029 Dentists, All Other Specialists
    - 29-1030 Dietitians and Nutritionists
      - 29-1031 Dietitians and Nutritionists

Images taken from:
https://www.bls.gov/OES/CURRENT/oes_stru.htm

SOC Codes: Data acquisition thus far…

- In total, we received 1,528,286 total SOC code input attempts from 80,118 different companies in the 2024 Q1 UI records as of May 21st. That is **66%** of the companies that submitted UI wage data.

- Compared to other states that are collecting SOC code this response rate in our first year is outstanding!

- We are also collecting hours worked

SOC Codes: The data cleaning process

- Currently, we are in the process of cleaning and validating the data. With a data set this immense, this has been a significant challenge.

- The first step is to validate that the SOC codes are accurate six-digit codes.

- The second step is to match the codes to Industry Standards.
  - The most challenging step here is to determine how much data manipulation is appropriate to do.

SOC Codes: The future

- It’s a Long and Winding Road, but when the data set is ready, it should allow us to make more accurate statements than ever before about:
    - The Hours Worked
    - What exactly folks are doing in the workplace

- What these data may help you all do:
    - In a general sense, we will be better able to talk about the distribution of careers within a given industry.
    - Provide very accurate income wages for specific occupations to students
    - Provide very accurate information about which companies employ people from which of the 821 specific occupations.

Return-on-Investment and Post-Secondary Outcomes Analysis

South Carolina Nursing Graduates

Data and Methodology

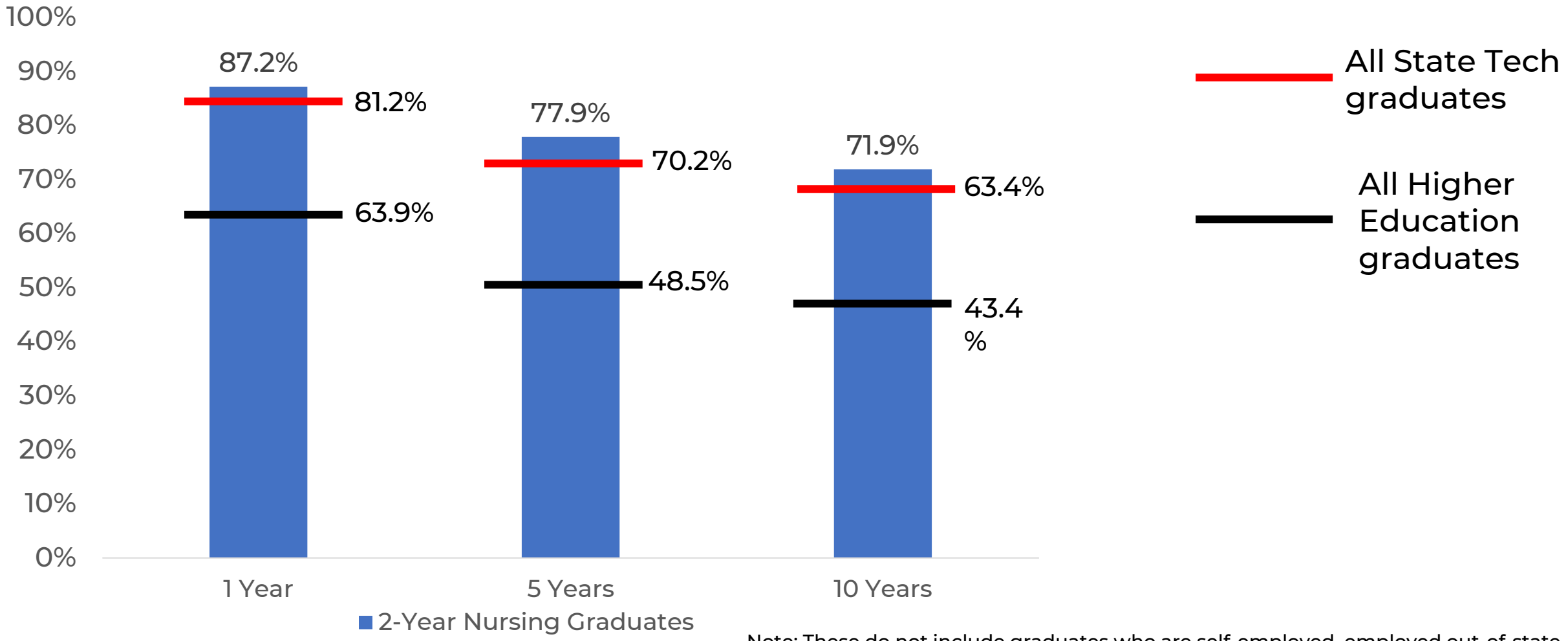
- 2-Year Graduates
  - 21,715 unique graduates
    - Calendar Years 2004-2021

- Matched with DEW UI Wage Records
  - Wages and industry of employment analyzed at select years post-graduation
    - One, Five, and Ten Years – 2-Year graduates

Data Limitations

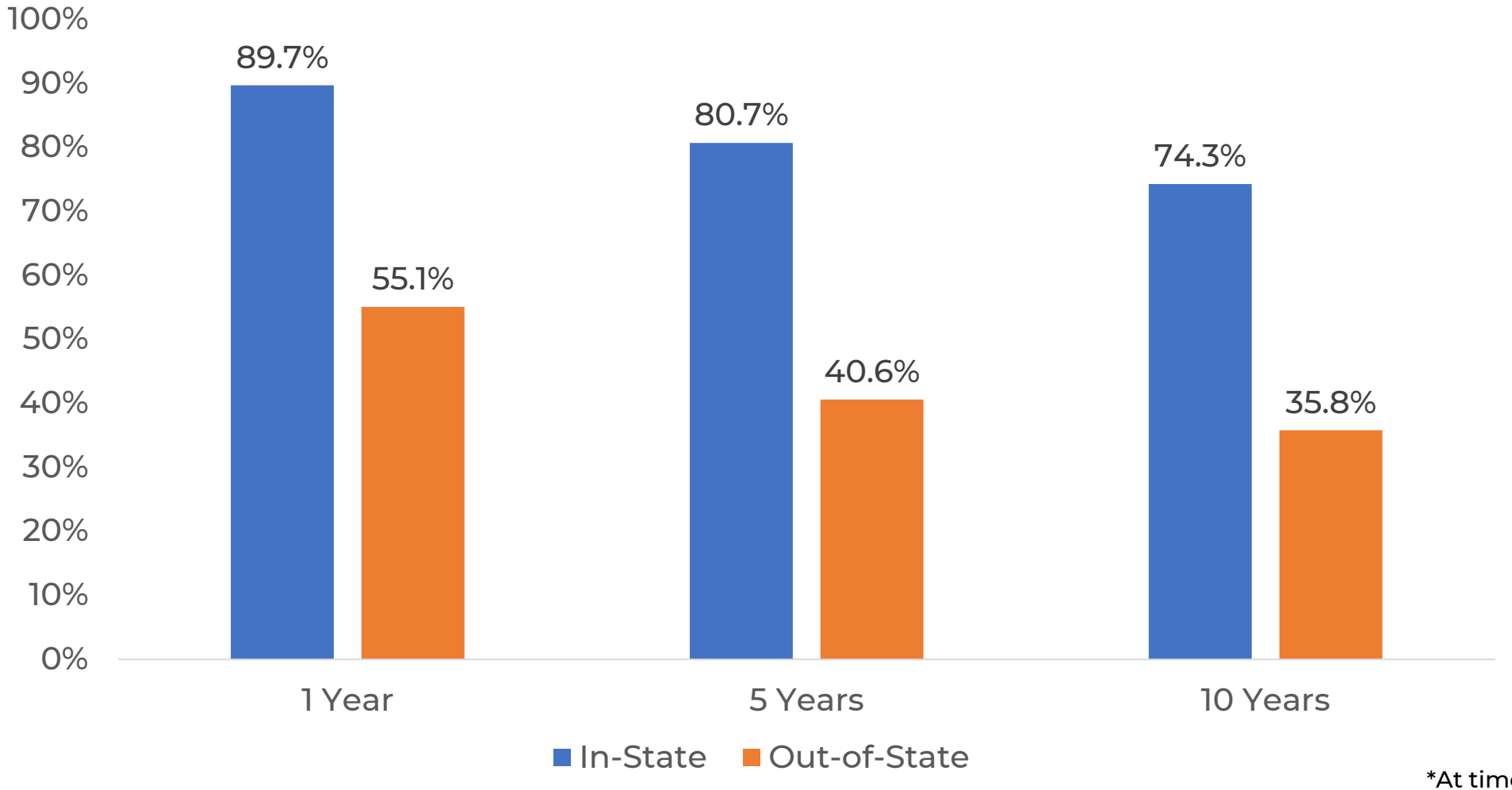
- The program and graduation data used within the 2-Year graduate data set were provided by the South Carolina Technical College System. Records were limited to students who completed an associate degree in nursing at a SC Technical College from CYs 2004-21
- Employment and earnings data are derived from the UI wage records in South Carolina provided by DEW
  - These do not include students who work outside of the state, are self-employed, work as independent contractors, or work for the federal government or military

Graduates found in Wage Records



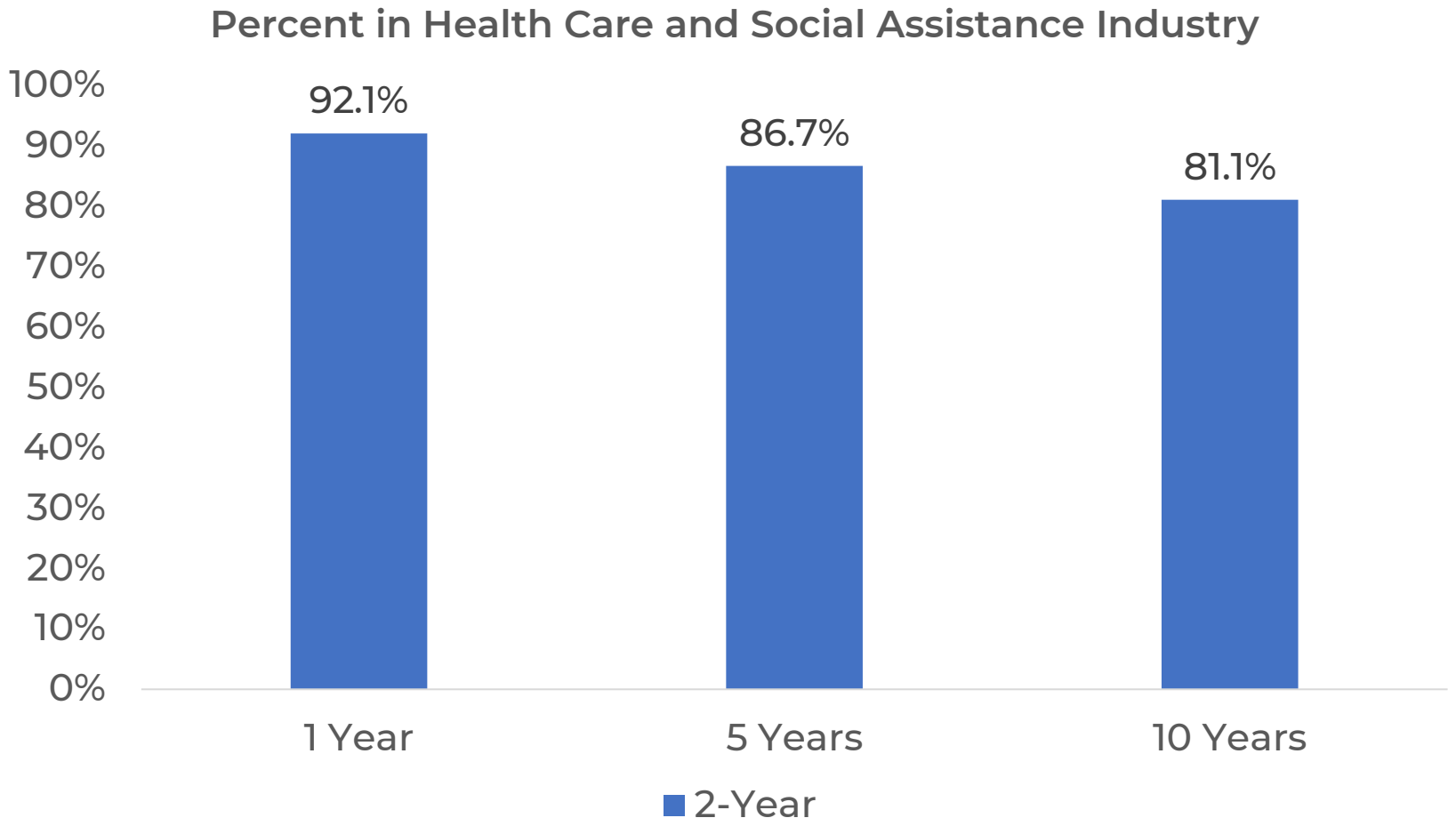
Note: These do not include graduates who are self-employed, employed out-of-state, work as independent contractors, or who work for the federal government or military

Residency* of Graduates in the Wage Records



*At time of enrollment
Note: Over 90% of graduates are in-state

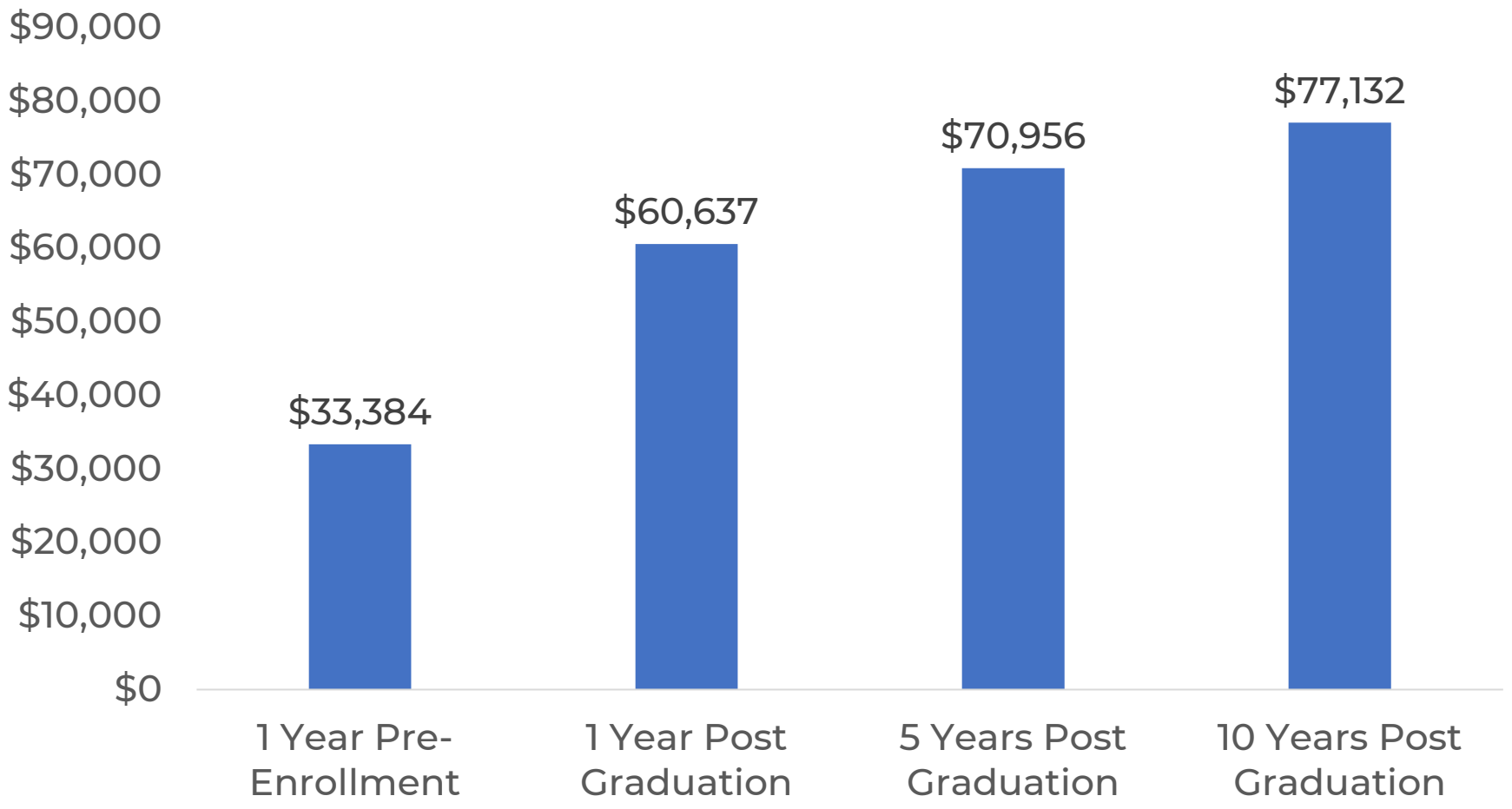
Industry of Employment



- Graduates not found in Health Care and Social Assistance are most likely to be found in the Administrative and Support and Waste Management and Remediation Services* industry, Educational Services industry, and Finance and Insurance industry

*Includes Temp employees

Median Earnings – Associate Degree Holders

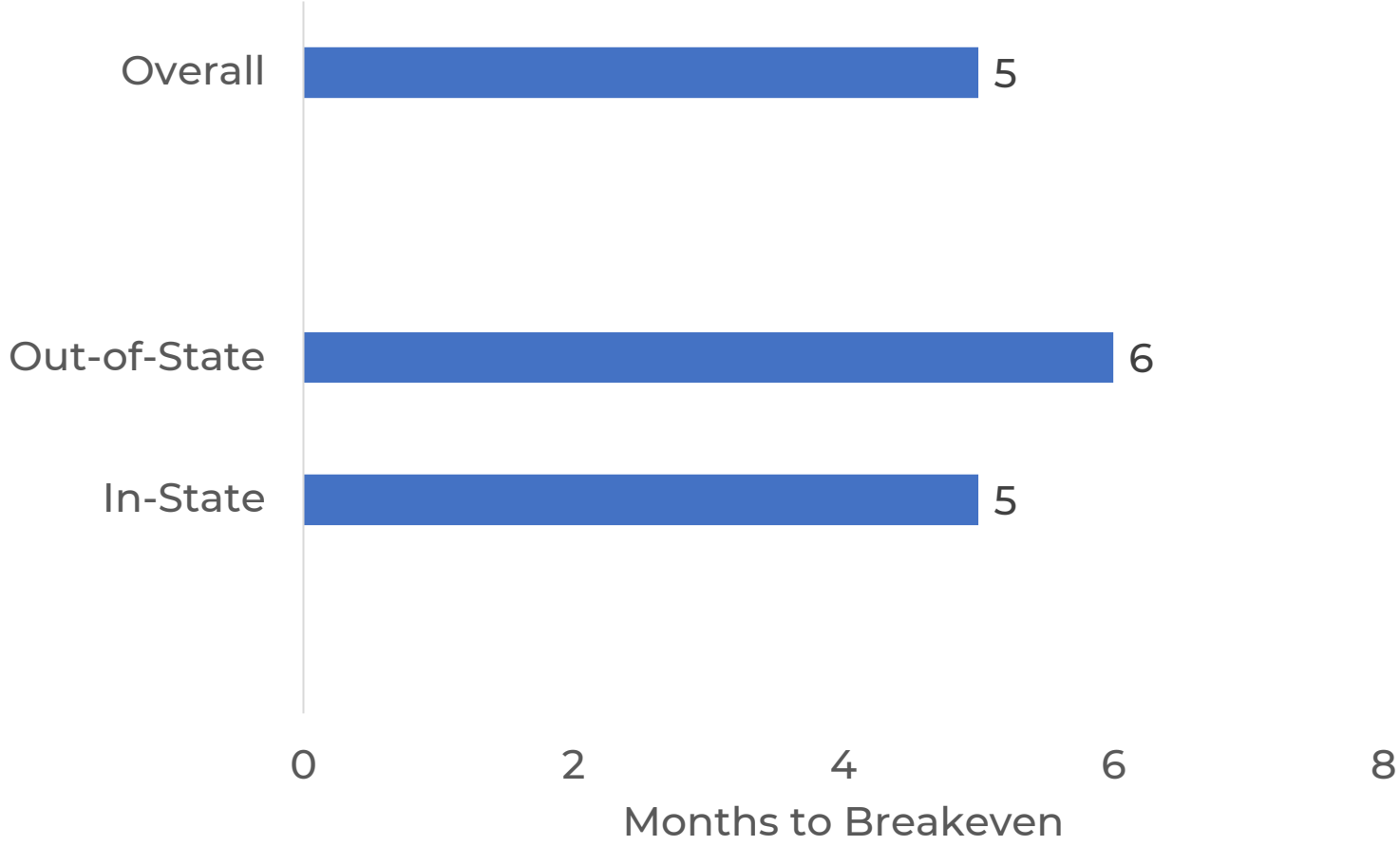


Considerations when Calculating ROI

- Caveats to ROI
  - Lack of information about specific financial aid (scholarships, loans, and grants)
  - Opportunity costs not known
  - Non-economic benefits of degree difficult to quantify (social capital etc.)

Cost of Degree and ROI – Associate* Degree

- **Cost** (2-Year) :**
  $10,000
- **Wage Premium*** :**
  $23,000/Year
- **Time to Breakeven (Post-Completion) :**
  5 Months



*Includes all individuals who obtained an associate degree, regardless of if they receive further higher education
**Calculated by a weighted average of published in-state tuition costs for institutions by graduate frequency in the data
***Additional wages compared to those of a high school graduate (median)

Job Postings – Specific Occupations

- Past 12 Months: **92.5%** of the **33,500 job postings** open to bachelor's degree holders require only an associate degree

- Top 3 in-demand nursing occupations
  1. Registered Nurses (~71%)
  2. Licensed Practical and Licensed Vocational Nurses (~16%)
  3. Nurse Practitioners (~5%)

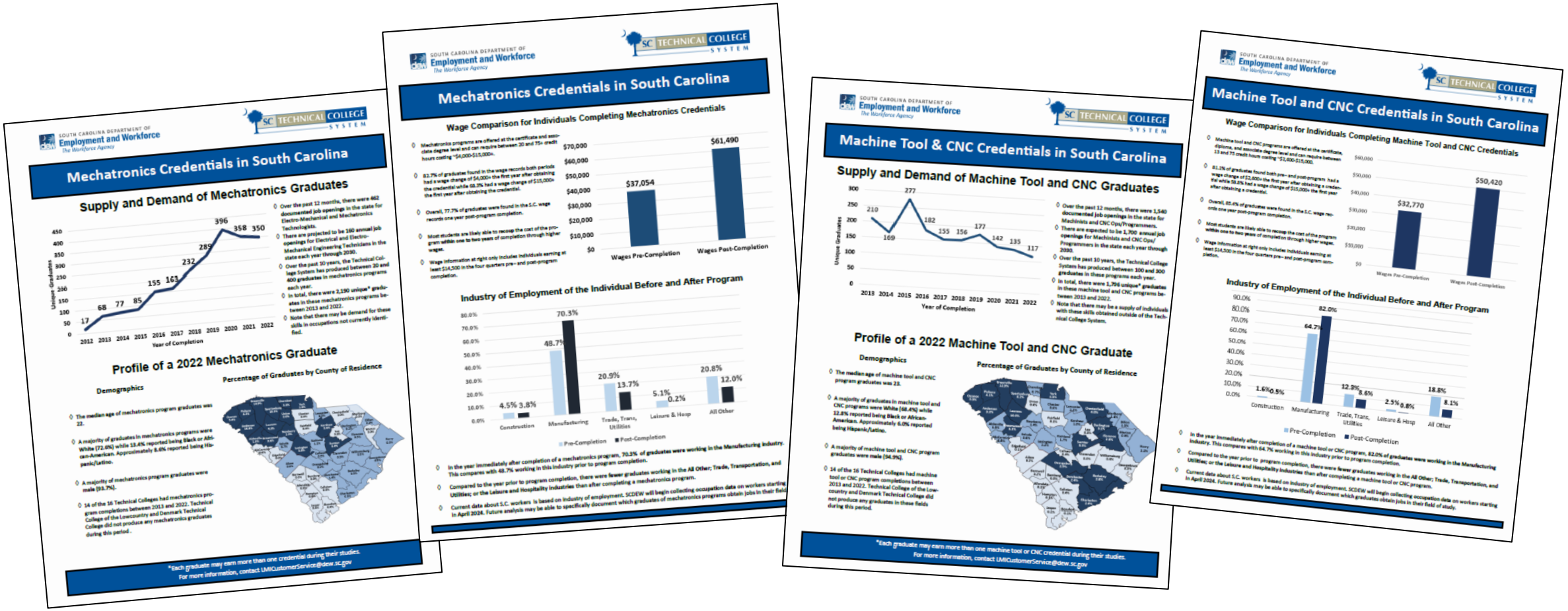
- Registered Nursing is the most in-demand occupation in the U.S., and the second* most in-demand occupation in South Carolina

*The most in-demand occupation in South Carolina is First-Line Supervisors of Retail Sales Workers
Note: These postings include all job openings for nurses across educational attainment levels

Glossary/Methodology

- Wage Premium: Additional wages compared to those of a high school graduate (median).
- Associate degree: Includes all individuals who obtained an associate degree, regardless of if they receive further higher education.
- Cost of degree: Calculated by a weighted average of published in-state tuition costs for institutions by graduate frequency in the data.
- Residency: Determined by the state of residency at the time of enrollment into the institution.

One Pager Examples



Questions

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