

Navigating the Future of the Healthcare Workforce (with a focus on postsecondary educational pathways)

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Overview

- Descriptive trends
- Evolving workforce needs
- Credentials of value / Emerging credential trends

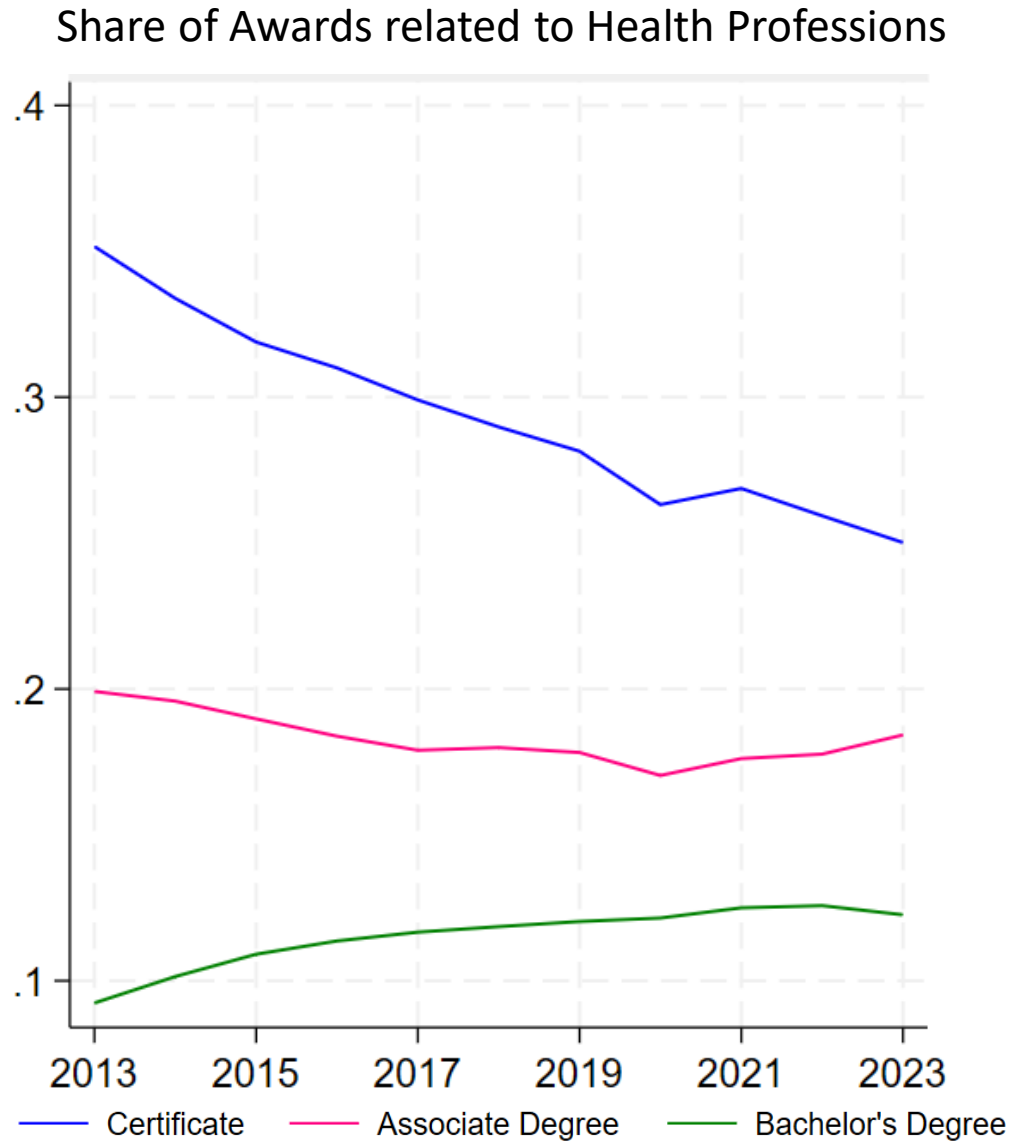
Trends

Labor market demand: Healthcare industry

- The Bureau of Labor Statistics forecasts that healthcare jobs will grow significantly faster than the average industry, accounting for 45% of all new jobs
 - Will be among the fastest growing industries, projecting nearly 10% employment growth through 2032
 - An aging population, as well as increased demand for mental health professionals and chronic disease specialists contribute to projected employment growth
- As we collect more data on health and health outcomes, an increased need for data and informatics specialists in the healthcare space
 - More broadly, as emerging technology is integrated into the healthcare space there is increased demand for dynamic and technology-savvy healthcare workers
- Increased demand likely exacerbates existing labor shortages in the industry

Credential production patterns do not necessarily reflect forecasts

- In the US, awards in associate degrees and certificates in other subjects are outpacing healthcare

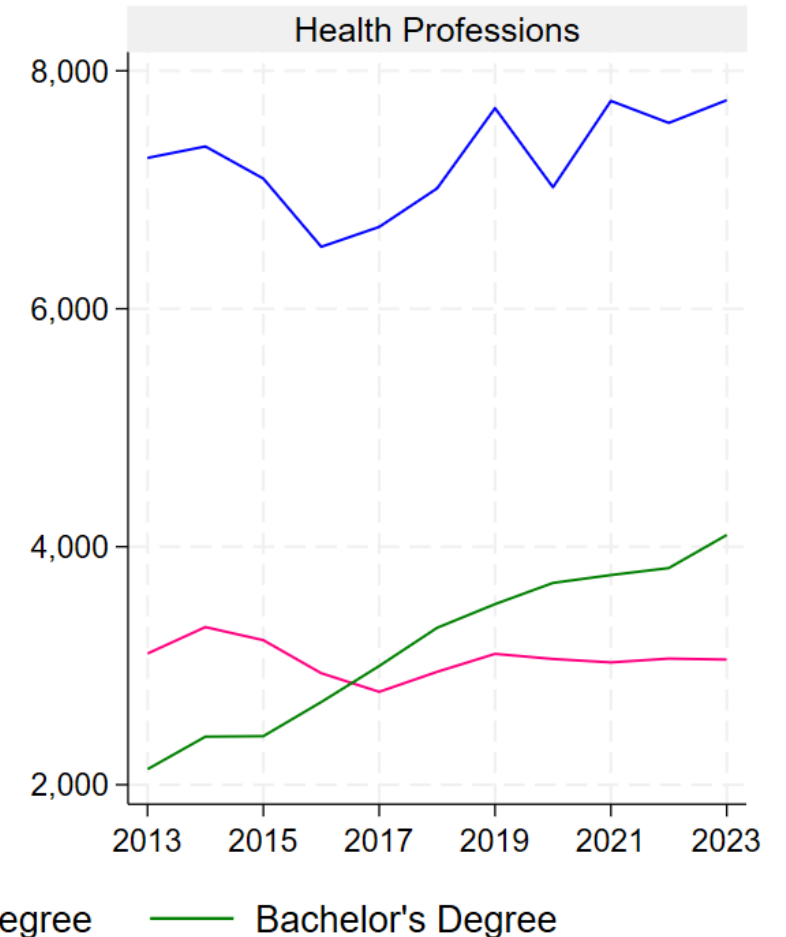
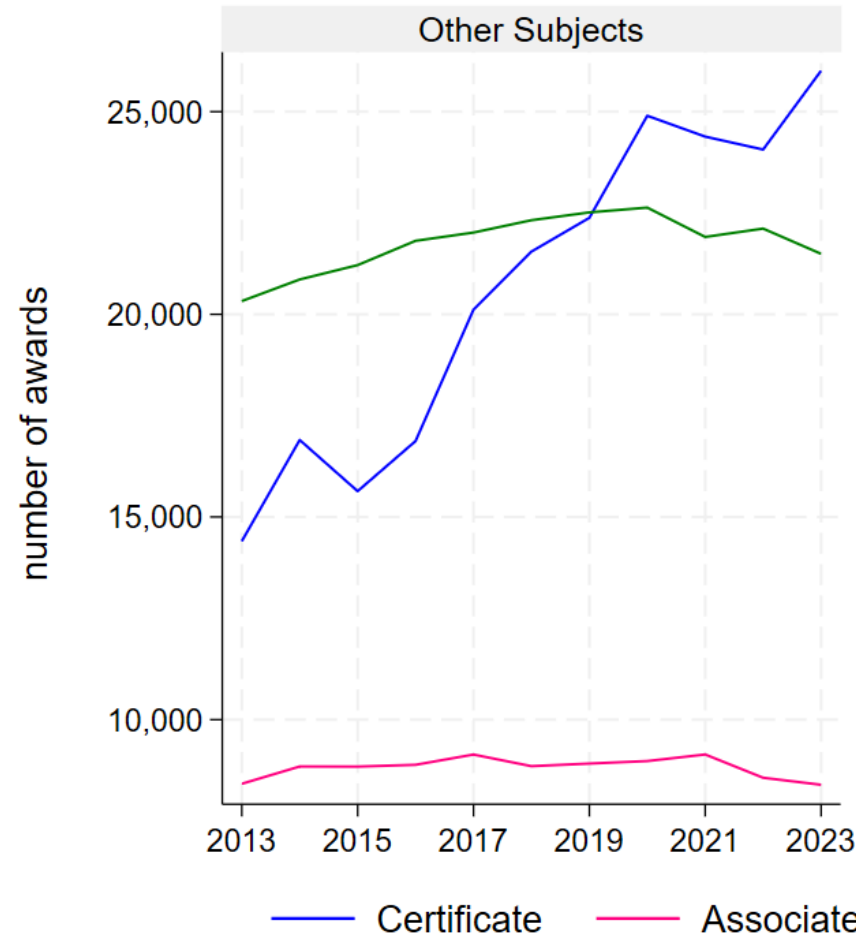


Sources: NCES, IPEDS

Notes: Degrees are classified as healthcare if they are categorized as CIP code 51: health professions and related clinical sciences. Certificates include under one year, between one and two years, and under four years. Post-baccalaureate certificates are not included.

Postsecondary degrees in Kentucky

- BAs in healthcare related subjects have doubled over the last decade
 - Exceeds BA growth in other subjects
- In contrast, certificates in health professions have been stagnant compared to rapid growth in other subjects



Sources: NCES, IPEDS

Notes: Degrees are classified as healthcare if they are categorized as CIP code 51: health professions and related clinical sciences. Certificates include under one year, between one and two years, and under four years. Post-baccalaureate certificates are not included.

Key questions

- How do we boost labor supply and bring in a diverse array of students to meet healthcare needs?
- How do we support our post-secondary institutions in training the future healthcare workforce?
- How do we encourage innovation among institutions and employers while protecting students and public funds?

Evolving workforce needs

The future of work and skill needs

- Widespread fears that AI will negatively affect the job market
 - 2023 Gallup poll: 75% of Americans think it will decrease jobs this decade
 - Musk (2023): at some point “no job is needed” because of an AI “magic genie that can do everything you want.”
- History suggests innovation creates new jobs by increasing productivity and augmenting their capabilities
 - Industries experiencing technological progress tend to grow, not shrink
 - Job creation and destruction are not likely to be equally distributed across job categories and skills
- Key question is whether automation or augmentation will accelerate faster
 - e.g., Acemoglu & Restrepo, 2019; Autor, 2024; Autor et al., 2024; Brynjolfsson & McAfee, 2014, 2015; CEA, 2024

Richard Feynman's bird

- There's a difference between knowing the name of something and knowing something
 - *See that bird? It's a brown-throated thrush, but in Germany it's called a Halzenfugel, and in Chinese they call it a Chung Ling and even if you know all those names for it, you still know nothing about the bird. You only know something about people; what they call the bird. – Richard Feynman*
 - Names do not constitute knowledge
- Reasons to believe that AI will not eliminate the need for expertise, but instead amplify it
 - AI can increase the productivity of experts, by lowering costs of information acquisition and computation
 - Will lower the cost of learning names
 - But AI unlikely to substitute for expertise: Expert judgement, understanding, and creativity will remain irreplaceable skills
- Potential to not only amplify expertise, but to democratize it

Key questions

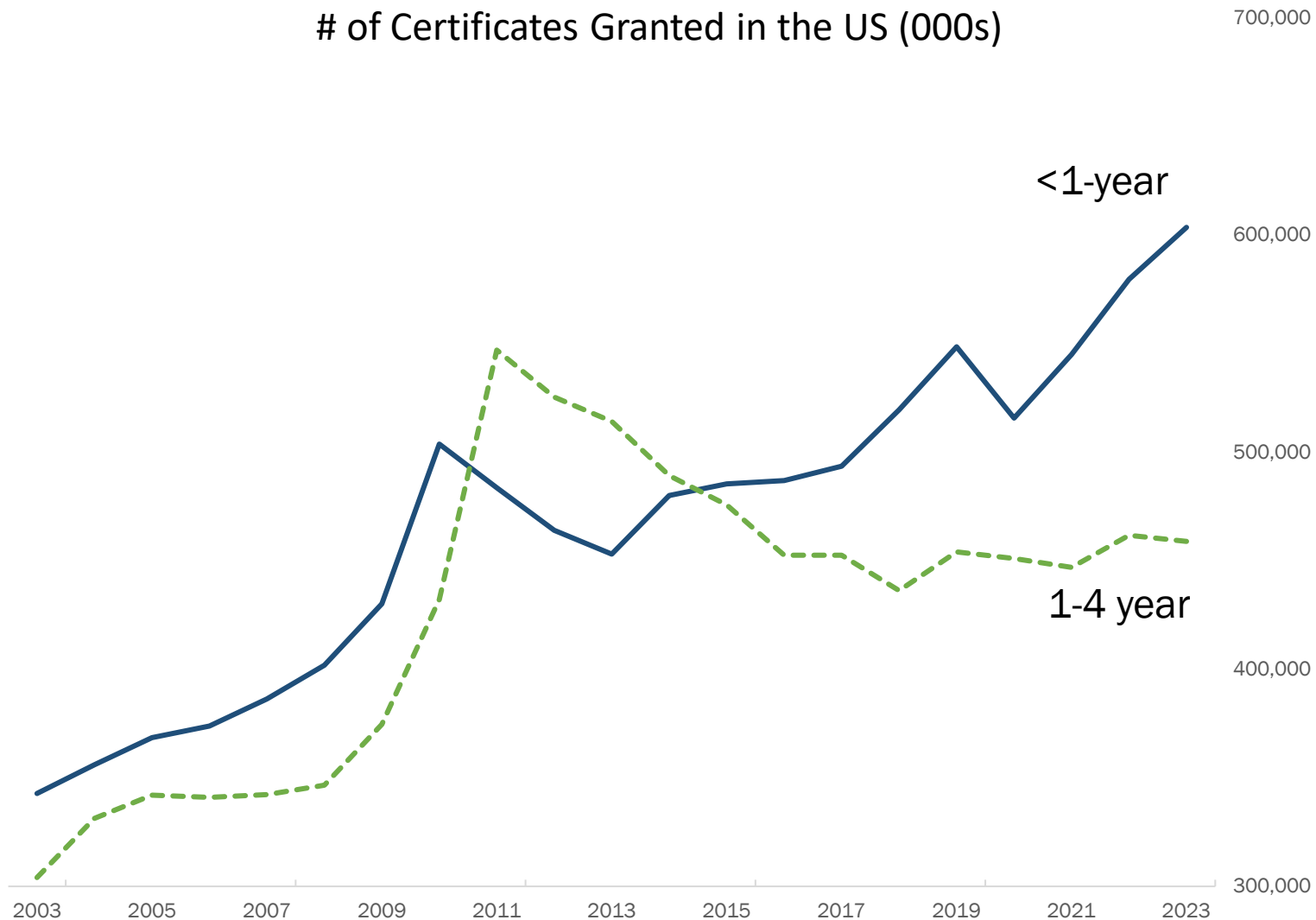
- Under a lens where expertise will continue to command a market premium...
- What constitutes expertise in tomorrow's workforce? What are irreplaceable skills?
- How do we prepare a healthcare workforce that is trained on irreplaceable fields and is adaptable to future changes?
- What is the role of postsecondary institutions in preparing students to adapt?
 - Much of the focus currently is related to things like assignments, advising, and learning software
 - Will require changes to curricula, assessments, classroom practices, and faculty
- Who will have access to the most productive educational and career pathways?

Credentials

Dimensions of Credential Value

- **Strong benefits**
 - Ability to get a job in desired field
 - Progress in a career
 - Adequate compensation and benefits
- **Appropriate costs**
 - Direct outlays (including future payments)
 - Opportunity costs
- **Risk and uncertainty negatively affects students and workers**
 - Transparent information for students and employers is necessary
 - Direct and indirect forms of insurance can help reduce risk

The rise of certificates

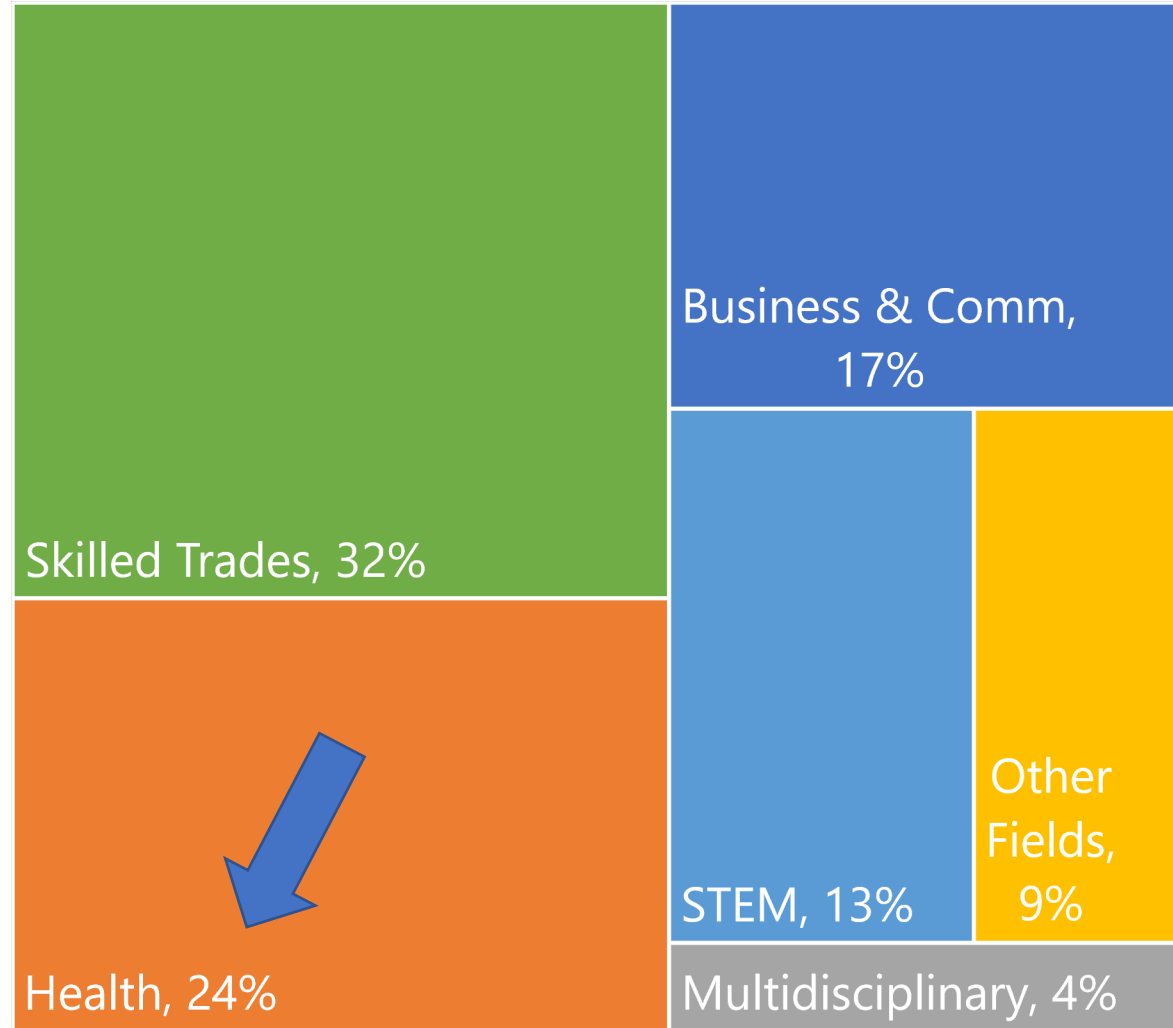


- Rapid rise in certificates awarded, especially <1 year
 - # of certificates awarded annually has grown ~60% over past 20 years
 - Account for >1/4 of UG credentials granted in US
 - Other certificates not counted in this graph: non-T4, non-credit, workforce, non-postsecondary institutions, tech sector/industry, graduate certificates
- Variation across sectors & states
 - Ample variation across states
 - Public sector: Largest # of awards and greatest growth (140% growth)
 - 4-year institution share has rapidly risen (~25% of < 1-yr certs in most recent year)
- These pathways often start in HS and overlap with workforce training

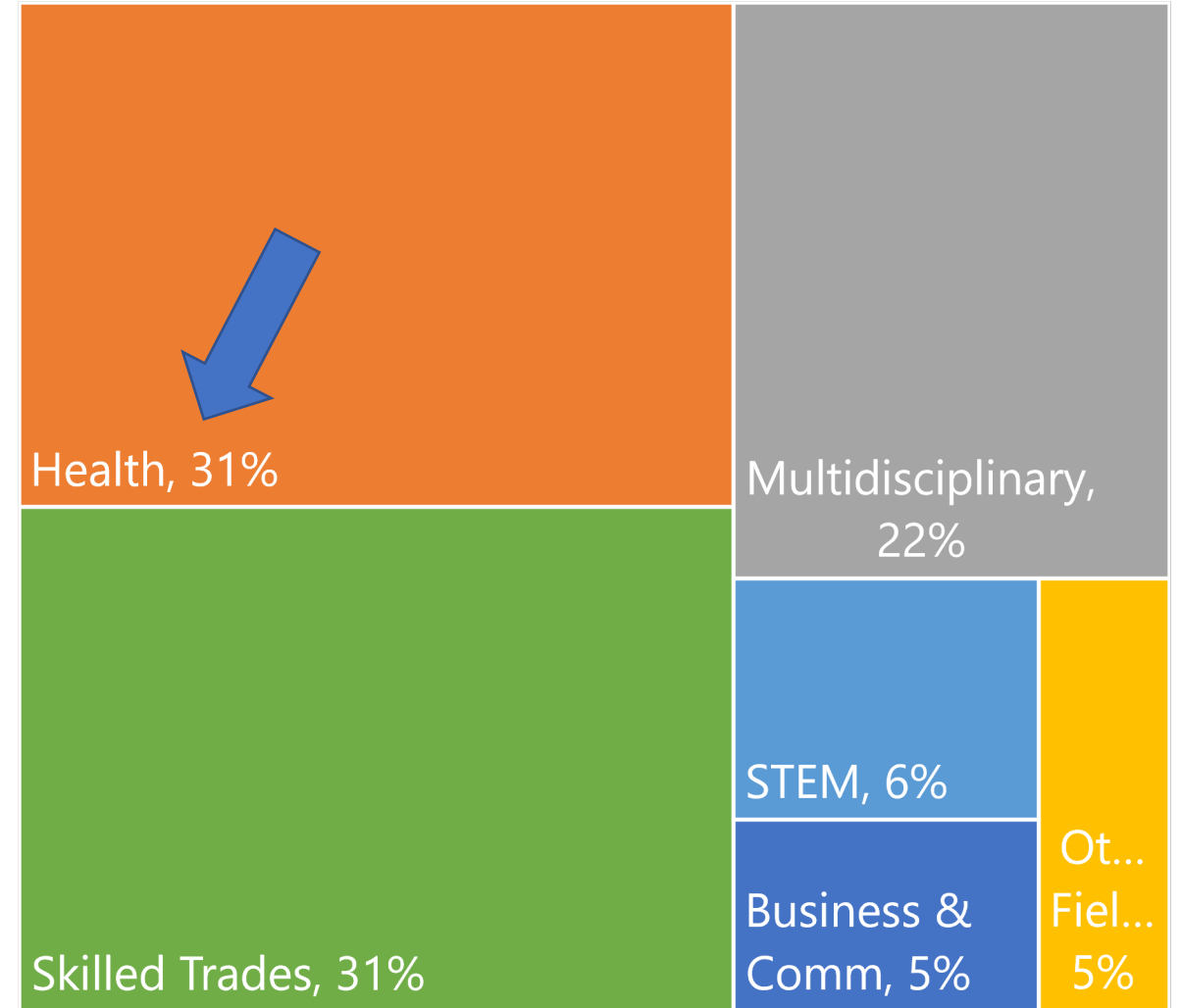
Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Completions component final data (2001-02 - 2019-20) and provisional data (2020-21). Notes: This figure includes only data postsecondary institutions that participate in Title IV federal financial aid programs.

Most popular certificate fields

<1-year



1-4 year

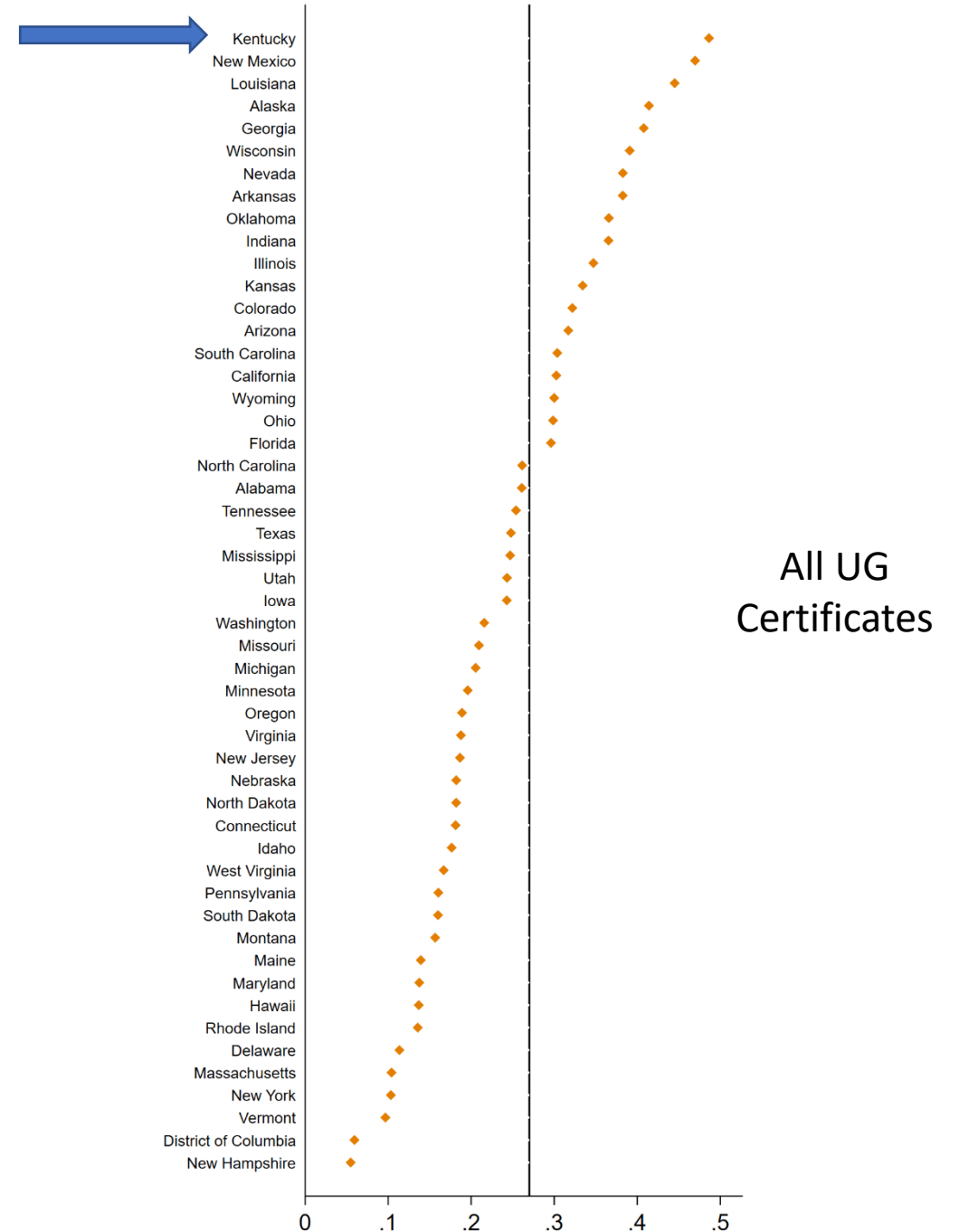


SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Completions component 2020-21 provisional data. Notes: This figure includes only postsecondary institutions that participate in Title IV federal financial aid programs. Certificate counts include both degree- and non-degree-granting institutions.

Certificate awards by state

Certificate share of credentials awarded, 2022-2023

- Kentucky has historically had among the highest rates in the country of certificates awarded per capita and short-term certificates per associate degree granted
 - State policies are likely to affect the supply of and demand for different types of credentials (e.g., Attainment goals, Workforce-aligned grants)
- Most recent year (undergrad):
 - 34K certs awarded / 29K < 1-year certs
 - 3 certificates for every associate degree
 - 1.5 certs for every bachelor degree
 - Share of undergrad credentials
 - All UG certs: 49%
 - <1-year UG certs: 41%

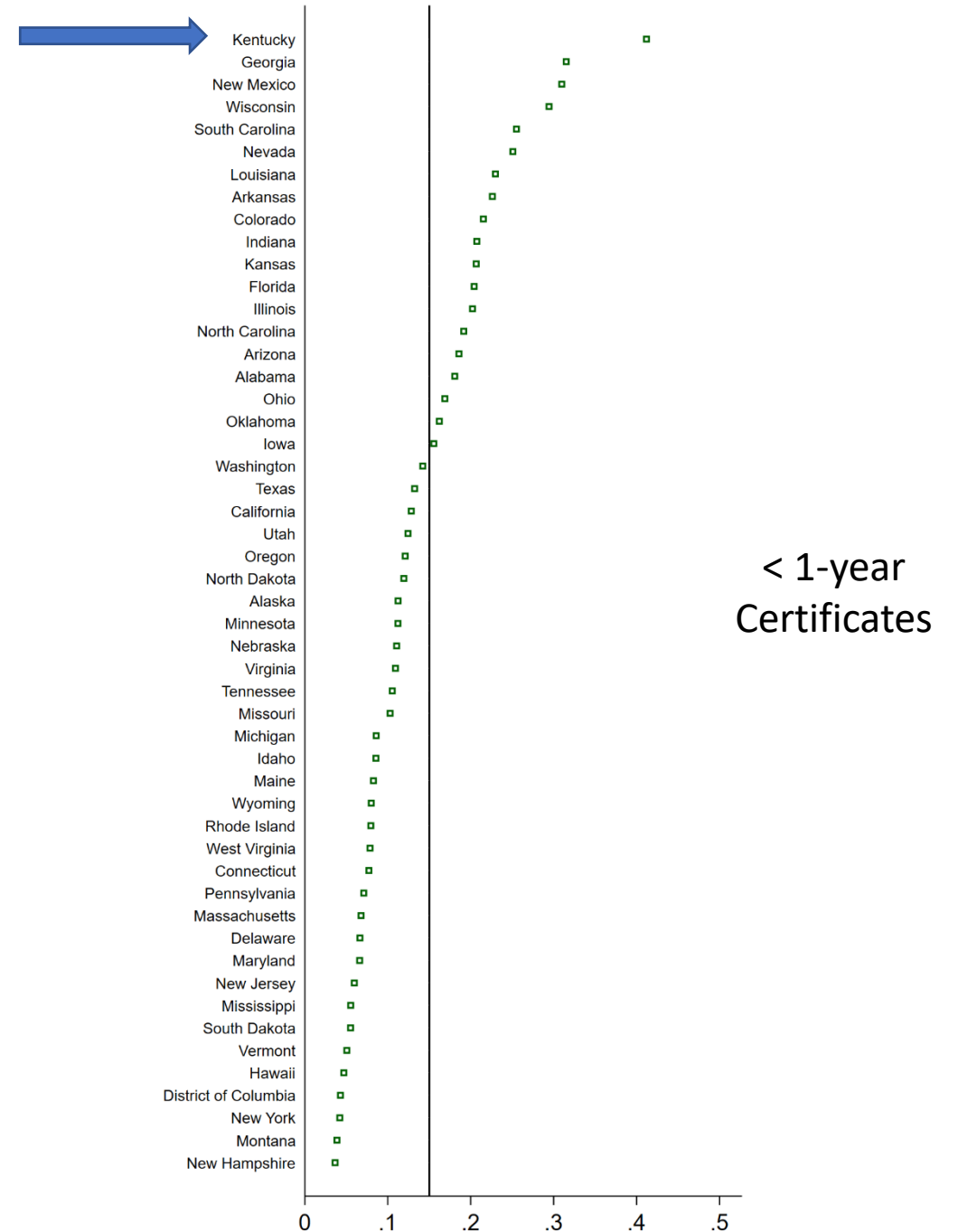


Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS). Vertical line is national average

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Certificates as risk management (or risk multiplier?)

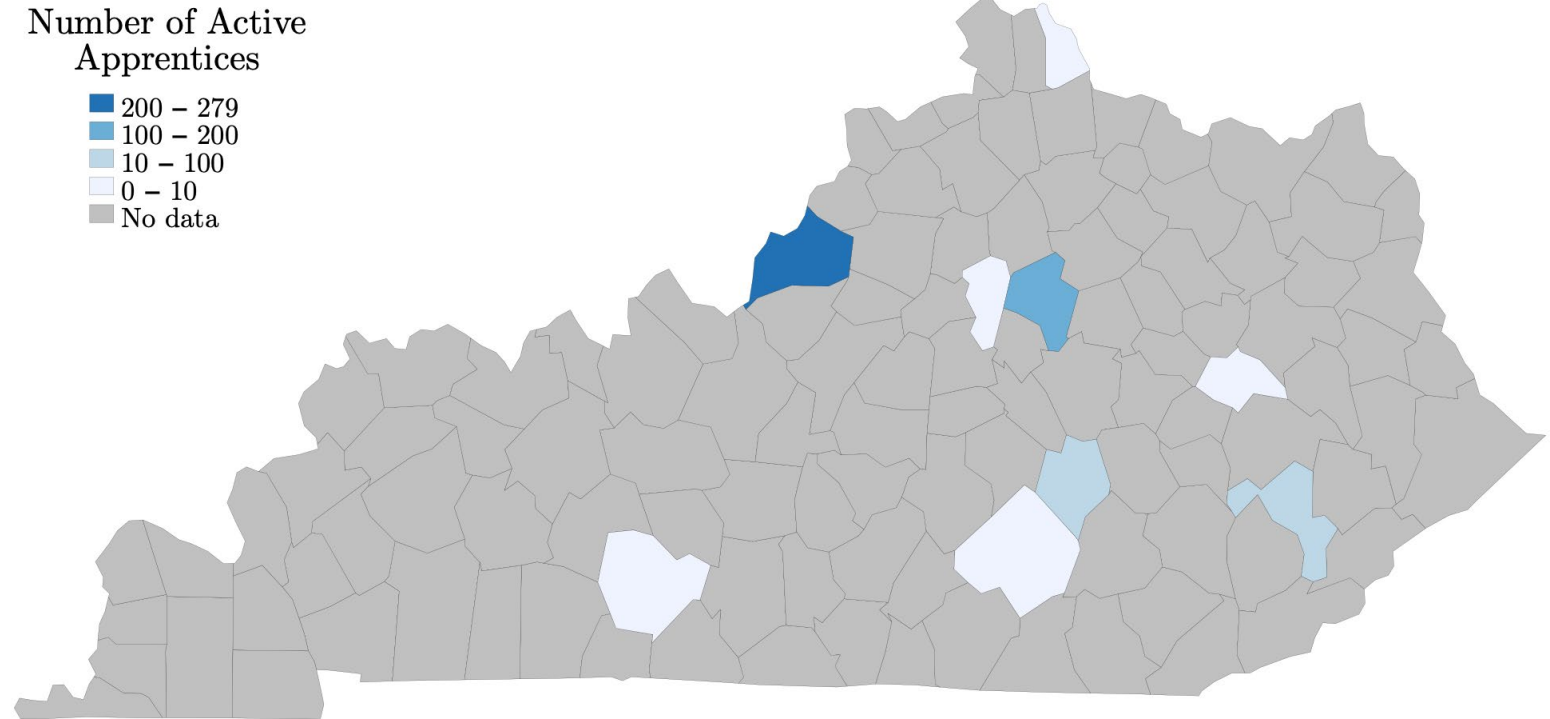
- Attractive to many types of learners not traditionally served well
 - Displaced workers
 - Adult learners
 - Working learners/Learning workers
 - Risk-averse students
- Cheaper in both direct cost and time to complete
- Lower cost of entry...*but also exit*
 - On ramps and off ramps
 - Democratization and diversion
 - Stepping-stones to degrees?

Key Questions

- What are the benefits and costs of certificate programs?
 - Prior literature on certificates finds earnings effects of ~0% to 50%, with substantial variation by context, field of study, length, and gender
 - Limited research on longer-term outcomes and outcomes beyond earnings and employment, including societal returns
- Can credentials be stacked effectively?
- Are certificates portable across other institutions and employers?
- Are benefits durable over time?
- Can modular pathways be built that balance applied versus general skills?
- Are students forgoing more lucrative educational pathways for the ease of shorter-term programs? Which ones?
 - Are specific types of students more likely to pursue (or be directed into) some fields versus others?
 - Does this potentially widen inequality, and income and wealth disparities?

Another pathway: Apprenticeships

- Push to expand access to registered apprenticeship opportunities across the country, including in the healthcare sector
 - Apprenticeships can help grow talent by combining training with experience
- Kentucky currently has healthcare apprenticeship programs available in 9 of its 120 counties
 - Concentrations in Jefferson and Fayette counties



Sources: Kentucky Works

Notes: Number of active apprentices represents active apprentices in healthcare-related apprenticeships recorded as of October 2024. Apprenticeships are categorized as healthcare related based on occupation title listed.

Closing thoughts

- The lines between traditionally siloed domains are blurring
 - Higher education vs. secondary education
 - Education vs. workforce training
 - Title IV funds vs. WIOA funds
- Advancement is not likely to be equal
 - Recent and future trends may accentuate disparities across student and institutional groups
- Critical to reduce risk and uncertainty so that students can invest in themselves
- Data is the new gold
 - Shout out to CPE and KYSTATS!
- Questions and challenges abound, but so do opportunities

Thank you!