



CAREER QUARTERLY

Career Information, Job Seeking Advice, Labor Market Data, and More!



In This Issue

Virginia Economy at a Glance **2**

Labor Market Research

A “Tail” of Productivity in Pet Care Services: New Technology Enables Rapid Growth **3**

Job Searching

Education Level and Projected Openings, 2023–33 **11**

Career and Labor Market Information Publications

<https://virginiaworks.com/publications> **10**



Virginia's Economy at a Glance

Data Series	Feb 2024	Mar 2024	Apr 2024	May 2024	June 2024	July 2024
Labor Force Data						
Civilian Labor Force(1)	4,591.5	4,588.7	4,584.5	4,579.0	4,574.7	(p)4,570.6
Employment(1)	4,451.8	4,454.6	4,455.1	4,454.2	4,452.2	(p)4,446.0
Unemployment(1)	139.7	134.2	129.4	124.8	122.5	(p)124.6
Unemployment Rate(2)	3.0	2.9	2.8	2.7	2.7	(p)2.7
Nonfarm Wage and Salary Employment						
Total Nonfarm(3)	4,211.8	4,230.0	4,236.7	4,245.9	4,251.4	(p)4,256.2
12-month % change	1.5	1.8	1.9	2.0	1.9	(p)2.0
Mining and Logging(3)	7.3	7.2	7.3	7.3	7.3	(p)7.3
12-month % change	0.0	-1.4	0.0	0.0	0.0	(p)0.0
Construction(3)	220.0	222.0	222.2	223.6	225.5	(p)225.8
12-month % change	2.6	3.4	3.8	4.6	5.3	(p)5.3
Manufacturing(3)	248.2	249.7	250.2	250.1	250.2	(p)250.2
12-month % change	0.7	1.6	1.8	1.7	1.5	(p)1.7
Trade, Transportation, and Utilities(3)	673.8	677.2	678.7	678.4	678.1	(p)678.9
12-month % change	0.3	0.7	0.8	0.7	0.6	(p)1.0
Information(3)	69.5	69.7	69.9	70.6	71.6	(p)71.0
12-month % change	-2.0	-1.7	-1.5	-0.3	1.6	(p)1.4
Financial Activities(3)	221.0	221.1	221.3	221.9	221.6	(p)219.8
12-month % change	0.2	0.0	0.2	0.4	-0.4	(p)-1.2
Professional & Business Services(3)	815.2	817.9	816.7	815.4	821.5	(p)823.6
12-month % change	0.4	0.8	0.7	0.5	1.1	(p)1.8
Education & Health Services(3)	598.8	599.6	605.7	607.1	608.6	(p)608.4
12-month % change	4.3	4.1	5.0	4.7	4.6	(p)4.3
Leisure & Hospitality(3)	414.2	415.3	414.3	414.8	415.7	(p)420.3
12-month % change	1.7	2.1	1.4	1.2	0.8	(p)1.6
Other Services(3)	200.3	201.5	202.8	204.6	204.9	(p)205.0
12-month % change	1.6	1.9	2.3	3.1	2.8	(p)2.8
Government(3)	743.5	748.8	747.6	752.1	746.4	(p)745.9
12-month % change	1.9	2.5	2.3	2.8	1.8	(p)1.6

Footnotes

(1) Number of persons, in thousands, seasonally adjusted.

(2) In percent, seasonally adjusted.

(3) Number of jobs, in thousands, seasonally adjusted.

(p) Preliminary

Source: U.S. Bureau of Labor Statistics

Labor Market Research



A “Tail” of Productivity in Pet Care Services: New Technology Enables Rapid Growth

If Fluffy, Spot, or Fido is a beloved member of your household, you are not alone—approximately 62 percent of Americans own a pet.¹ And if your household is like the average pet owning household, you spent about \$770 on your pet in 2021. So, what are these dollars paying for?

According to the 2021 Consumer Expenditure survey, vet services and pet food account for 35 and 33 percent of total spending on pets, respectively. Other spending on pets is allotted to pet purchase, supplies, and medicine (23 percent) and pet care services (9 percent).² Although pet care services accounts for the smallest share of pet spending, both output and employment in the industry have grown rapidly in recent years.³

Each time you pay someone to watch Fluffy while you are out-of-town, take Spot for a walk while you are at work, or trim Fido’s coat, you and your pets are enjoying the benefits of the pet care services industry. This article uses new labor productivity and related data series from the U.S. Bureau of Labor Statistics productivity program to examine how pet ownership trends are changing. Labor productivity is a measure of efficiency that relates the goods and services produced by an industry (also known as output) with the number of hours worked that went into producing those goods and services. Productivity data for the pet care services industry show trends such as increased pet ownership; younger pet owners choosing to pay more for individualized, quality pet care; and “pet tech” bringing the gig economy to pet owners and integrating technology into how they care for their pets.⁴

Recent output growth in pet care services

Revenue in pet care services more than quadrupled from 2004 to 2021, reaching \$10.7 billion in 2021. According to the latest Economic Census data from 2017, pet boarding services accounted for the largest share of total pet care revenue, followed by pet grooming services and pet sitting and dog walking services.⁵ (See table 1.)

Table 1. Revenue in pet care services, in dollars and percentage share

Service	Revenue (in dollars)	Percentage share of total revenue
Pet boarding services	\$2.3 billion	44%
Pet grooming services	1.6 billion	30
Pet sitting and dog walking services	631 million	12
Training services	263 million	5
Sales of pet food and supplies	145 million	3
Other revenue	377 million	7
Total revenue	5.4 billion	100

Source: U.S. Census Bureau.

Output in pet care services is measured as constant dollar sales, derived by deflating industry revenue with BLS consumer price indexes to remove the effects of inflation.⁶ Output grew a cumulative 144.6 percent from 2004 to 2021, equivalent to 5.4 percent per year. The most rapid period of growth was from 2012 to 2019, when output accelerated by a cumulative 57.0 percent (6.7 percent per year). Despite this impressive growth, output in pet care services fell 15.6 percent from 2019 to 2020 as a result of the COVID-19 pandemic.

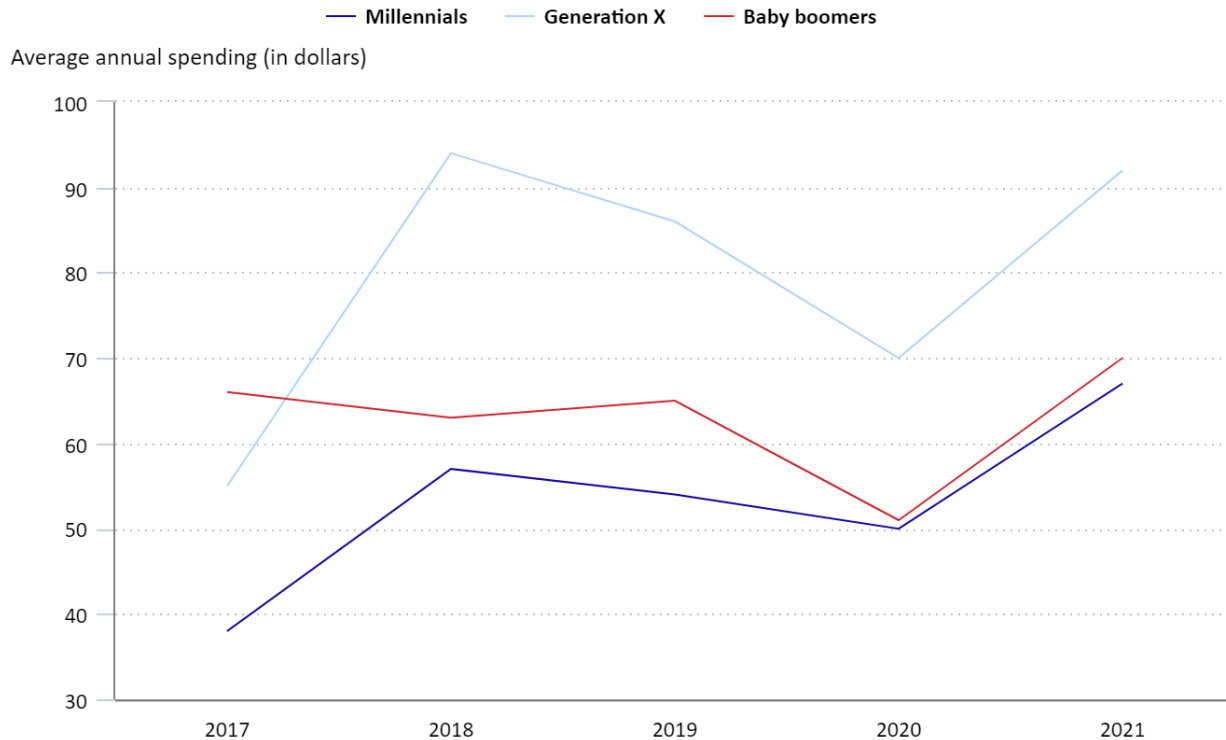
The rise in output from 2004 to 2021 has been driven by growth in pet ownership and pet spending. For generations, Americans have loved owning pets. And with each passing generation, a larger share of Americans have owned pets. In fact, from 1988 to 2022, pet ownership increased 6 percentage points to 62 percent of all Americans. To understand the growth in the pet care services industry, it is useful to examine the three generations that make up the largest shares of pet owners as of 2021: millennials (32 percent), baby boomers (27 percent), and Generation X (24 percent).⁷

Generational spending on pet care services

According to the latest consumer expenditure data, baby boomer spending on pet care services has been consistent from 2017 to 2021, increasing by 6.9 percent (about \$4).⁸ (See chart 1.) More substantial shifts in spending came from Generation X and millennials.

From 2017 to 2021, Generation X’s spending on pet care services rose rapidly, by 67.6 percent. At \$55, Generation X spending was below baby boomer spending in 2017 but rose above it to about \$92 in 2021. One potential factor that may have driven this rise in spending is the growing share of “empty nesters” in Generation X.⁹ As more millennials moved out of their childhood homes, their Generation X parents may have purchased new pets and replaced spending on their children with spending on their pets.

Chart 1. Average annual spending on pet care services by generational cohort, 2017–21



Click legend items to change data display. Hover over chart to view data.
 Source: U.S. Bureau of Labor Statistics.

Like Generation X, millennials rapidly increased their spending on pet care services. Millennial spending was only \$38 in 2017, but rose 75.1 percent to \$67 in 2021. This increase in spending may be driven in part by recent increases in millennial income. Millennials have achieved a higher median income than either of their generational predecessors. Census data shows that the median personal income of a 40-year-old millennial is \$49,000 per year, 14 percent more than Generation X made at age 40 and 25 percent more than baby boomers made at age 40. As millennials increased their earnings, they may have used the extra money to spoil their beloved pets. In fact, a recent survey finds 76 percent of pet owning millennials say they are more likely to splurge on something for their pet than they are to splurge on something for themselves.¹¹

The recent trend of “pet humanization” seems to be changing American pet ownership as well.¹² For the modern pet owner, caring for a pet means much more than simply buying a bag of kibble and a bone. Now, there is an array of new pet care services an owner can purchase: a day at the spa including a “pawdicure,” training sessions with a pet behavioral therapist, or even a birthday “pawty” coordinated by a professional pet party planner. These emerging trends help explain the revenue and output growth in pet care services in recent years.

The rise of “pet tech” and small businesses in pet care services

The way pet care services are provided has changed as dramatically as the type of services offered. Pet technology, or “pet tech,” is a new development in the world of pet ownership, bringing the gig economy to pet owners and integrating technology into how they care for their pets.¹³ Pet tech ranges from mobile applications and devices that allow owners to monitor their pets while they are at work to platforms that connect owners with local dog walkers, groomers, and even on-demand veterinarians. The pet tech market reached \$5.7 billion in 2020 and is expected to reach \$20 billion by 2027.¹⁴



New and innovative pet care services require specialized labor from workers in the industry. As

a result, from 2004 to 2021, the number of hours worked in pet care services more than tripled, rising at a rate of 7.8 percent annually. To put this in context, hours worked in veterinary services only grew at an average annual rate of 3.2 percent during the same period. Hours worked in pet care services increased at the sharpest rate between 2009 and 2019, growing at a rate of 10.2 percent per year.

Small establishments and self-employed workers are especially prominent in the pet care services industry. Demand for individualized pet care from quality-minded pet owners combined with the advancement of pet tech allowed small establishments to both compete and thrive with larger firms. In the past, self-employed groomers, dog walkers, and pet sitters would likely find it difficult to expand their business beyond their immediate neighborhood or circle of acquaintances. To succeed as a full-time job, it may have been necessary for these self-employed to invest in their own shops or kennels. However, smartphone technology and platform applications now make it possible for independent pet care service providers to reach a much larger pool of potential customers.

The BLS productivity program estimates an industry’s number of self-employed workers and their total hours worked using household responses from the BLS Current Population Survey (CPS).¹⁵ According to this data, there were about 5,000 self-employed workers who worked approximately 7.4 million hours in pet care services in 2004. (See chart 2.) By 2021, self-employed workers had more than tripled to 17,800 and worked about 24.1 million hours.

Chart 2. Hours worked (in millions) in pet care services by type of worker, 2004–21

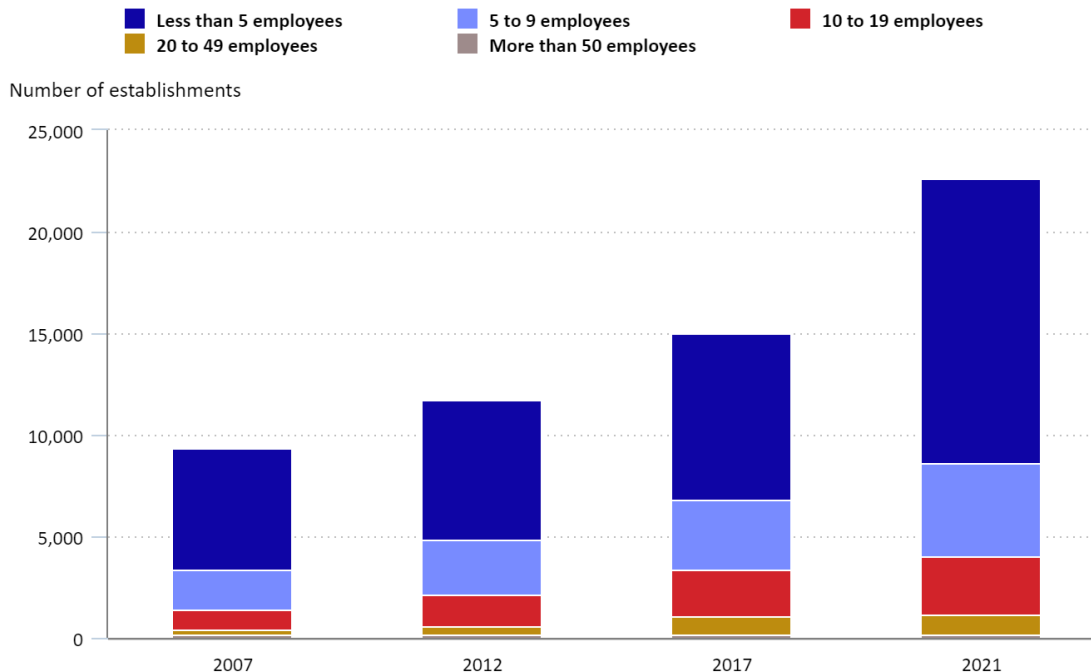


Click legend items to change data display. Hover over chart to view data.
 Source: U.S. Bureau of Labor Statistics.

The growth in employment and hours worked by payroll workers has been no less dramatic. From 2004 to 2021, both payroll employment and hours worked grew by an average annual rate of 7.7 percent.¹⁶

Taking a closer look at the payroll employment data, we find that small establishments compose a particularly robust portion of the pet care services industry. (See chart 3.) According to the latest Economic Census data from 2017, over three quarters of pet care services establishments operating for the entire year had fewer than 10 employees. Data from earlier Economic Censuses (2007 and 2012) show that small establishments greatly outnumbered larger ones in those years as well.

Chart 3. Number of establishments in pet care services by establishment size



Click legend items to change data display. Hover over chart to view data.
 Source: U.S. Bureau of Labor Statistics.

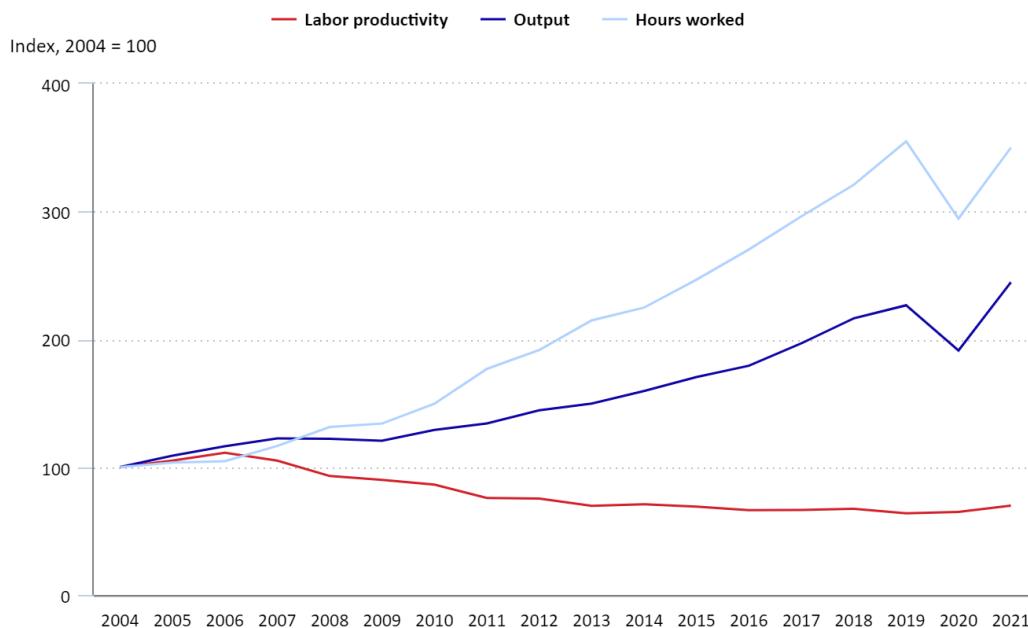
Small businesses, both employer and self-employed, are a core aspect of pet care services. In part, this is likely attributable to a low barrier to entry. Pet care services can be provided without large capital expenditures or the need to hire a significant number of workers. The pet tech application platforms allow almost anybody to “dip their paw” into the industry with minimal capital or risk.

However, it is worth considering that small businesses may have a market advantage in pet care services. As millennials and Generation X pet owners demand more elaborate and individualized pet care services, small businesses can provide those services with greater flexibility. In some sectors, economies of scale allow large firms to gain market share and force small businesses out of the industry. In other words, large firms can often leverage their cost advantages into lower prices that consumers prefer.¹⁷ When it comes to their pets, consumers are not as sensitive to prices, nor are they willing to cut corners on quality. Thus, it seems that large firms in pet care services are not able to price their smaller competitors out of the market.

Labor productivity trends in pet care services

With all the recent growth and change in the pet care services industry, one might be surprised to find that the pet care services productivity statistics do not reflect the same pattern. From 2004 to 2021, labor productivity in pet care services fell a cumulative 30.1 percent (2.1 percent per year). (See chart 4.) Productivity declined most rapidly from 2006 to 2011, falling at a rate of 7.4 percent annually. From 2011 to 2021, productivity stagnated, declining 1.8 percent per year. Productivity rose moderately by an annual 4.6 percent from 2019 to 2021 as output recovered more quickly from the effects of the COVID-19 pandemic than hours worked did. Despite this slight increase, the long-term productivity trend in pet care services has been one of decline.

Chart 4. Trends in labor productivity, output, and hours worked in pet care services, 2004–21



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

So, why has labor productivity in pet care services lagged? Consider the example of dog sitting services. The output is defined as the inflation-adjusted revenue from caring for the dog, while the hours worked are defined as the number of hours of work necessary to care for the dog. Before the rise of pet tech, most dog sitting services were provided by a kennel. With enough cages and equipment, caring for many dogs at a kennel would only require a few hours of work from a small staff. Self-employed dog sitters would have been limited in the scope of their operation and would most likely work a limited number of hours within their local area.

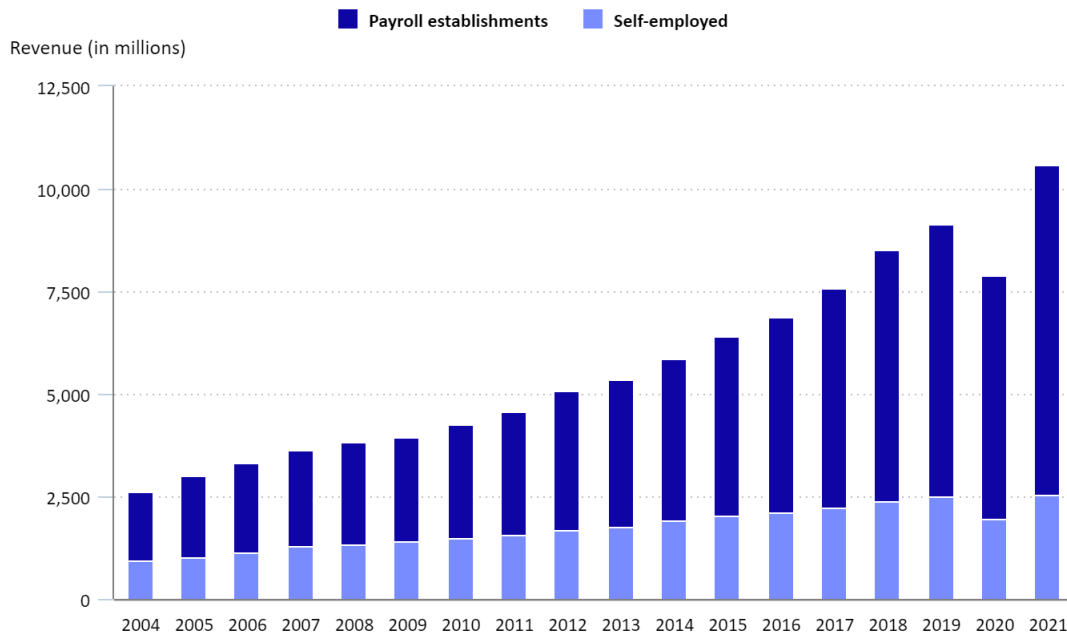
Now, consider how dog sitting may be provided through the gig economy. Using a modern dog sitting platform, a pet owner can easily find an individual willing to watch their dog. However, without the capital to care for more than one or two dogs at a time,

the sitter will be putting in more hours of work per dog than the kennel. The owner of the dog may even prefer an individual to a kennel because the individual will be providing more direct attention (hours worked) to their dog.

If this direct personalized care is in high demand, other dog sitters may start to compete on this basis, offering other complementary services to attract more customers. There is some evidence of this on popular pet care services platforms. Pet owners are given the option to filter for sitters that only host one pet at a time, offer bathing and grooming, or even provide drop-off and pick-up services.¹⁸ Some hosts even advertise that they will take your pet out to dinner with them or allow them on the couch for snuggles. Competition based on personalized care simply requires more time, causing hours worked to outpace output and ultimately lower productivity.

Annual revenue for payroll establishments is reported in the Census Bureau’s Service Annual Survey. Payroll establishment revenue climbed from about \$1.7 billion in 2004 to over \$8 billion in 2021, equivalent to an increase of 9.6 percent per year. (See chart 5.) This rate of revenue growth far outperformed the revenue of the self-employed. Self-employed revenue comes from the Census Bureau’s Nonemployer Statistics and increased from \$941 million in 2004 to \$2.5 billion in 2021, a growth rate of 6.0 percent per year.

Chart 5. Annual revenue (in millions of current dollars) in pet care services by type of establishment, 2004–21



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Combining the output results with the hours data shows us productivity growth in pet care services. From 2004 to 2021, payroll worker hours grew slightly faster than self-employed hours. Over the same period, payroll establishment revenue grew by a cumulative 378 percent and self-employed revenue grew by 171 percent. Thus, the productivity trends differ between payroll establishments and the self-employed. Payroll establishment revenue grew quicker than hours, implying positive productivity growth. Self-employed revenue grew much slower than hours, implying a decline in productivity.

Productivity in pet care services increased for both the self-employed and payroll workers in 2020 as a direct result of business closures and government-mandated restrictions tied to the COVID-19 pandemic. From 2019 to 2020, self-employed hours fell 42.0 percent and payroll worker hours fell 17.8 percent. Over this same period, revenue fell 21.2 percent for the self-employed and 10.6 percent for payroll establishments. The rapid decline in hours combined with the moderate decline in revenue implies a rise in labor productivity. Despite this brief uptick in productivity, the overall trend for the pet care services industry over the last decade is still stagnant.



Pet owners have made pets part of their family, and expect their pet care service providers to show the same level of care and attention to detail that they do in caring for their pets. So, it makes intuitive sense that labor hours would outpace output for both the self-employed and payroll establishments. It is also logical that the self-employed would generate particularly low productivity growth in comparison to larger establishments. Pet tech may have given individual gig workers the ability to provide specialized pet care, but those workers lack the capital that allows larger establishments the ability to provide pet care services with fewer labor hours.

Although output in the pet care services industry rose considerably over the last decade, the labor hours necessary to produce that output and please pet owners increased even faster, leaving pet care services productivity in the statistical doghouse of stagnant growth.

Conclusion

Pets have been a treasured part of American life for generations, consistent through periods of economic growth and turmoil, including a pandemic. However, pet ownership trends are changing as younger pet owners choose to pay more for the quality care they believe their pets deserve. In pursuit of more individualized service, owners integrated technology and the gig economy into pet care, shifting who competes and how they compete for pet owners' loyalty. This need for individualized service has caused labor hours to continually outpace output. Growth in pet care services productivity has therefore been left somewhere between a "ruff" and "impawsible" place over the last decade.

Source: Michael Schultz and Brian Chansky, "A "tail" of productivity in pet care services: new technology enables rapid growth," *Beyond the Numbers: Productivity*, vol. 13, no. 6 (U.S. Bureau of Labor Statistics, June 2024), <https://www.bls.gov/opub/btn/volume-13/a-tail-of-productivity-in-pet-care-services-new-technology-enables-rapid-growth.htm>

End Notes:

¹ Anna Brown, "About half of U.S. pet owners say their pets are as much a part of their family as a human member," Pew Research Center, July 7, 2023, <https://www.pewresearch.org/short-reads/2023/07/07/about-half-us-of-pet-owners-say-their-pets-are-as-much-a-part-of-their-family-as-a-human-member/>.

² "Table R-1. All consumer units: Annual detailed expenditure means, standard errors, coefficients of variation, and weekly (D) or quarterly (I) percents reporting, Consumer Expenditure Surveys, 2021" (U.S. Bureau of Labor Statistics, September 2022), <https://www.bls.gov/cex/tables/calendar-year/mean/cu-all-detail-2021.pdf>.

³ The pet care services industry includes establishments primarily providing services such as pet boarding, sitting, grooming, and training. Under the North American Industry Classification System (NAICS), pet care services is classified as NAICS 812910. Notably, this industry is separate from veterinary services.

⁴ BLS released labor productivity, output, and hours worked statistics for pet care services for the first time on June 27, 2024. These data series can be accessed through the Productivity program's databases and tables.

⁵ See "All Sectors: Industry by Products for the U.S. and States: 2017" (U.S. Census Bureau, 2017), <https://data.census.gov/table/ECNNAPCSIND2017.EC1700NAPCSINDPRD?q=ECNNAPCSIND2017.EC1700NAPCSINDPRD&n=812910&napcs=S0000.00>. Note that this detailed services data does not cover the self-employed. Therefore, revenue patterns for the industry as a whole may possibly be somewhat different.

⁶ Specifically, the Consumer Price Index for All Urban Consumers for pet services; purchase of pets, pet supplies, accessories; and veterinarian services is used to deflate industry revenue in pet care services.

⁷ Leesa Davis, "How different generations treat their pets," ManyPets, February 17, 2022, <https://manypets.com/us/blog/pets-by-generation/>.

⁸ Data represent the average annual spending on pet services for each generational cohort, including those in the cohort who do not own a pet. Generations are defined as: baby boomers born from 1946 to 1964, Generation X born from 1965 to 1980, and millennials born from 1981 to 1996.

⁹ Erin Ollila, "How Pets Help Ease the Transition to an Empty Nest," Hill's Pet Nutrition, Inc., October 21, 2016, <https://www.hillspet.com/pet-care/behavior-appearance/empty-nest-pets>.

¹⁰ Hillary Hoffower and Andy Kiersz, "Millennials make more money than any other generation did at their age, but are way less wealthy. The affordability crisis is to blame," Business Insider, September 22, 2021, <https://www.businessinsider.com/millennials-highest-earning-generation-less-wealthy-boomers-2021-9>.

¹¹ "76% Of Millennials Are More Likely To Splurge On Their Pets Than Themselves," Retail TouchPoints, <https://www.retailtouchpoints.com/resources/76-of-millennials-are-more-likely-to-splurge-on-their-pets-than-themselves>.

¹² "Pet Humanization - A Pivotal Growth Driver for the Global Pet Accessories Market," Business Wire, March 8, 2021, <https://www.businesswire.com/news/home/20210308005664/en/Pet-Humanization---A-Pivotal-Growth-Driver-for-the-Global-Pet-Accessories-Market---ResearchAndMarkets.com>.

¹³ For insight on the gig economy, see Elka Torpey and Andrew Hogan, "Working in a gig economy," Career Outlook, (U.S. Bureau of Labor Statistics, May 2016), <https://www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm>.

¹⁴ "Why is the demand for pet tech solutions on the rise?," Cogniteq, August 26, 2021, <https://www.cogniteq.com/blog/why-demand-pet-tech-solutions-rise>.

¹⁵ The CPS counts persons rather than jobs. Therefore, the total number of self-employed workers equals the number of CPS respondents who classify their work as self-employed for both primary and secondary jobs. The number of self-employed workers is disaggregated down to the level of pet care services from the higher level of aggregate industry that is collected by the CPS. This disaggregation is accomplished using ratios of nonemployer establishments from the U.S. Census Bureau's Nonemployer Statistics program. The methods used in calculating hours and employment by the BLS productivity program are explained in more detail on this webpage: Industry Hours and Employment.

¹⁶ The number of payroll workers and their labor hours are derived primarily from the BLS Current Employment Statistics (CES) survey. Hours paid data are converted to an hours worked basis using data from the National Compensation Survey (NCS). An additional adjustment is made to account for uncompensated work time using CPS data. Prior to 2007, total hours paid of production workers are calculated using data from the CES. A ratio of production worker hours to supervisory worker hours is calculated from CPS data, and this ratio is applied to the CES production worker total hours to estimate supervisory worker total hours. Payroll workers are the sum of production workers and supervisory workers. More information on these methods can be found in the Monthly Labor Review article "Improving estimates of hours worked for U.S. productivity measurement." This article discusses the new method for estimating hours worked that the U.S. Bureau of Labor Statistics began using for its productivity estimates in November 2022.

¹⁷ A previous Beyond The Numbers article titled "Checking out productivity in grocery stores" explained how large firms were able to dominate the grocery stores industry and institute labor saving practices to increase productivity.

¹⁸ "How do I manage my rates for additional services?," Rover, <https://support.rover.com/hc/en-us/articles/208655356-How-do-I-manage-my-rates-for-additional-services>.



Job Searching



Education Level and Projected Openings, 2023–33

Whatever your education level or goal, you have lots of career options. The U.S. Bureau of Labor Statistics (BLS) can show you which occupations are expected to have the most openings for new entrants with various levels of education.

BLS makes 10-year employment projections for more than 800 detailed occupations. Each occupation is assigned to the education level that's typically required for workers to enter. This article highlights the occupations that BLS projects to have the most openings each year, on average, from 2023 to 2033 for five education levels:

- ▶ No formal educational credential
- ▶ High school diploma or the equivalent
- ▶ Postsecondary education, but not a bachelor's degree
- ▶ Bachelor's degree
- ▶ Graduate degree

Across all occupations, BLS projects more than 19 million openings each year, on average, from 2023 to 2033. Most openings come from the need to replace workers who leave permanently, either to exit the labor force or to transfer to a different occupation. But others are from employment growth: that is, newly created jobs.

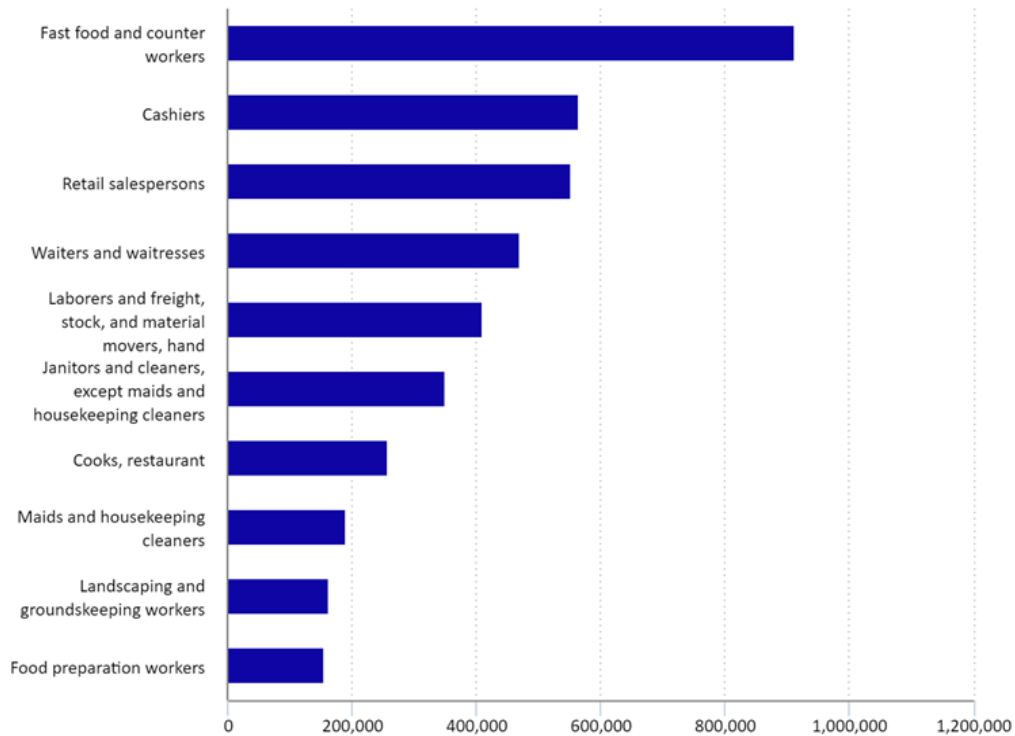
Keep reading to see charts showing projected openings, along with data on median annual wages, at each of the education levels. For comparison, the median annual wage for all occupations was \$48,060 in 2023. (A median wage is the point at which half of workers made more than the amount, and half made less.)

The charts also include data to indicate whether workers typically need experience in a related occupation for entry and whether on-the-job training to attain competency is typically required. And for selected occupations, the text highlights new BLS information about skills.

No formal educational credential

BLS classifies 108 occupations as not typically needing any formal educational credential. Chart 1 shows the 10 occupations in this group that are projected to have the most openings each year, on average, from 2023 to 2033.

Chart 1. No formal educational credential to enter: Occupations projected to have the most openings each year, on average, 2023–33



Hover over chart to view data.

Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections.

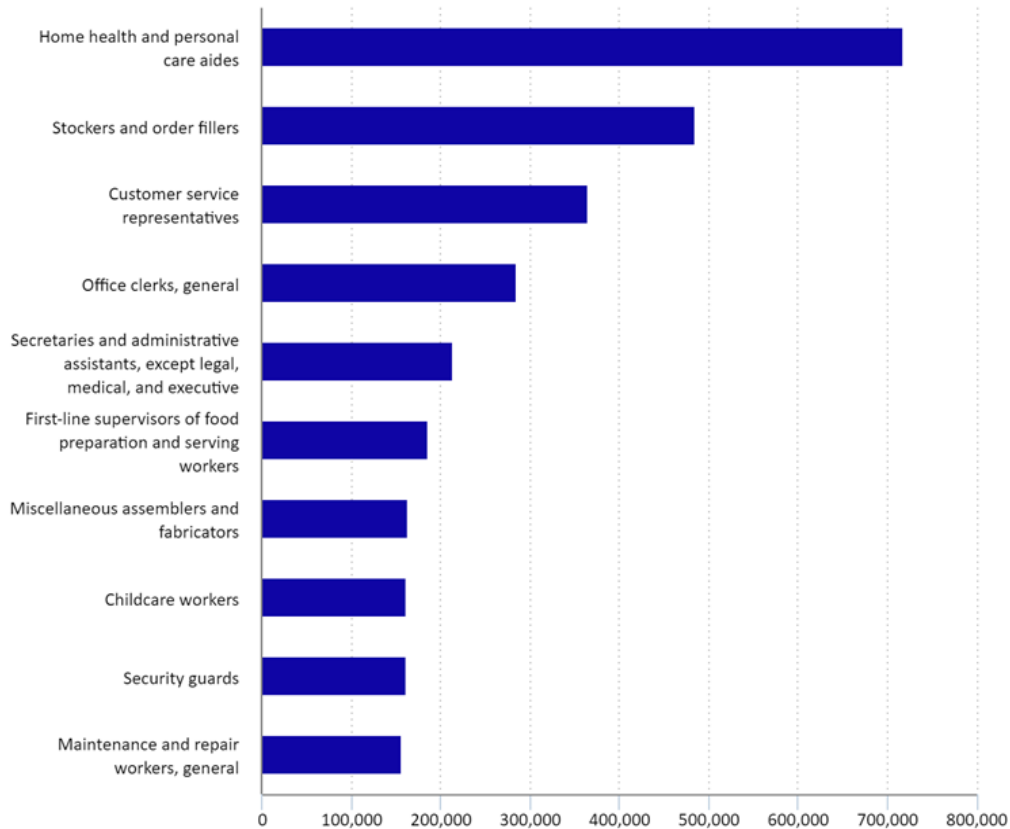
The occupations in chart 1 account for nearly 7 out of 10 openings projected at this education level. Fast food and counter workers is projected to have more openings than any other occupation in the economy: 912,400 each year, on average, from 2023 to 2033. Among the important skills that BLS identifies for workers in this occupation are customer service, attention to detail, and interpersonal communication.

Each of the occupations in chart 1, like most at this education level, had wages below the median for all occupations. The occupations in the chart may not require formal education, but they typically involve training on the job, often for 1 month or less.

High school diploma or the equivalent

There are 327 occupations that typically require a high school diploma or the equivalent (such as a GED)—nearly twice as many occupations as at any other level of education. Chart 2 shows occupations at the high school level that are projected to have the most openings annually, on average, from 2023 to 2033.

Chart 2. High school diploma or the equivalent to enter: Occupations projected to have the most openings each year, on average, 2023–33



Hover over chart to view data.

Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections.

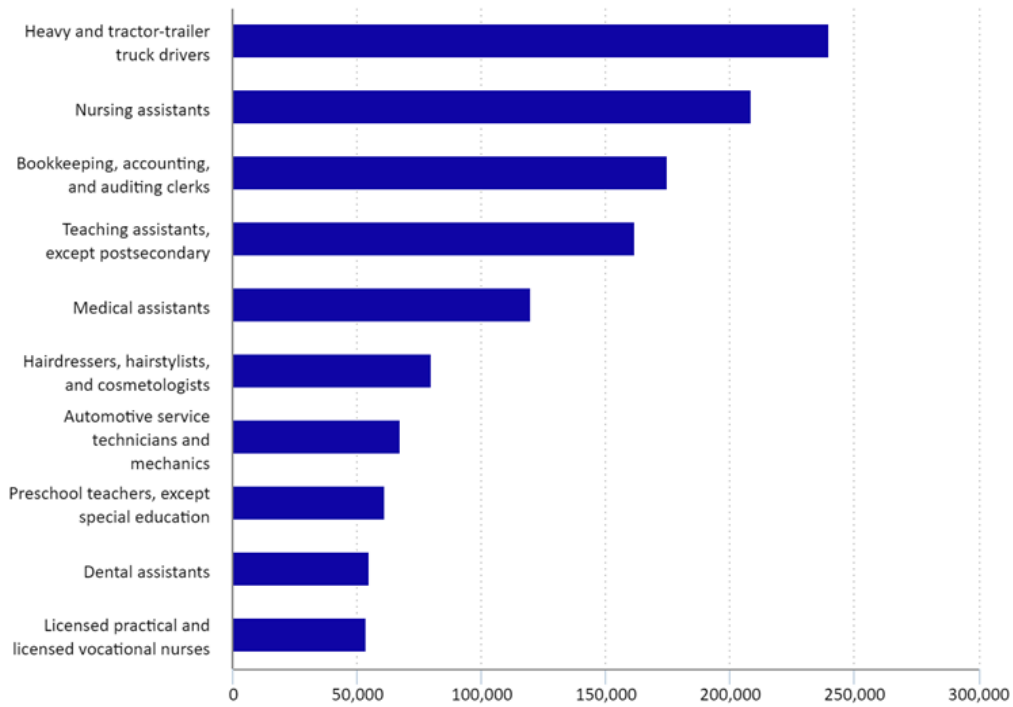
The occupations in chart 2 account for about 4 out of 10 openings expected in occupations at the high school level. With 718,900 openings expected each year, on average, over the decade, home health and personal care aides is projected to have the most openings of the occupations in this chart. Having strong interpersonal skills, as well as being adaptable and detail-oriented, are important for these aides.

Although none of the occupations in chart 2 had wages higher than the median for all occupations, almost half of the occupations at this education level did. In addition to a high school diploma or the equivalent, most of the occupations in chart 2 also typically require on-the-job training for workers to gain competency in their tasks.

Postsecondary education, but not a bachelor's degree

Fifty-one occupations typically require a postsecondary nondegree award, such as a certificate; 48 typically require an associate's degree; and 7 typically require some college but no degree. Chart 3 shows the 10 occupations at these education levels that are projected to have the largest numbers of openings each year, on average, over the decade.

Chart 3. Postsecondary education, but not a bachelor's degree to enter: Occupations projected to have the most openings each year, on average, 2023–33



Hover over chart to view data.

Note: None of the occupations in the table typically require work experience in a related occupation for entry.

Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections.

The occupations shown in the chart account for about 6 out of 10 openings projected at these education levels. Heavy and tractor trailer truck drivers is projected to have the most openings of the occupations in chart 3: about 240,300 each year, on average, from 2023 to 2033. It’s helpful for these truck drivers to have good manual dexterity and other fine motor skills and to be detail oriented and adaptable.

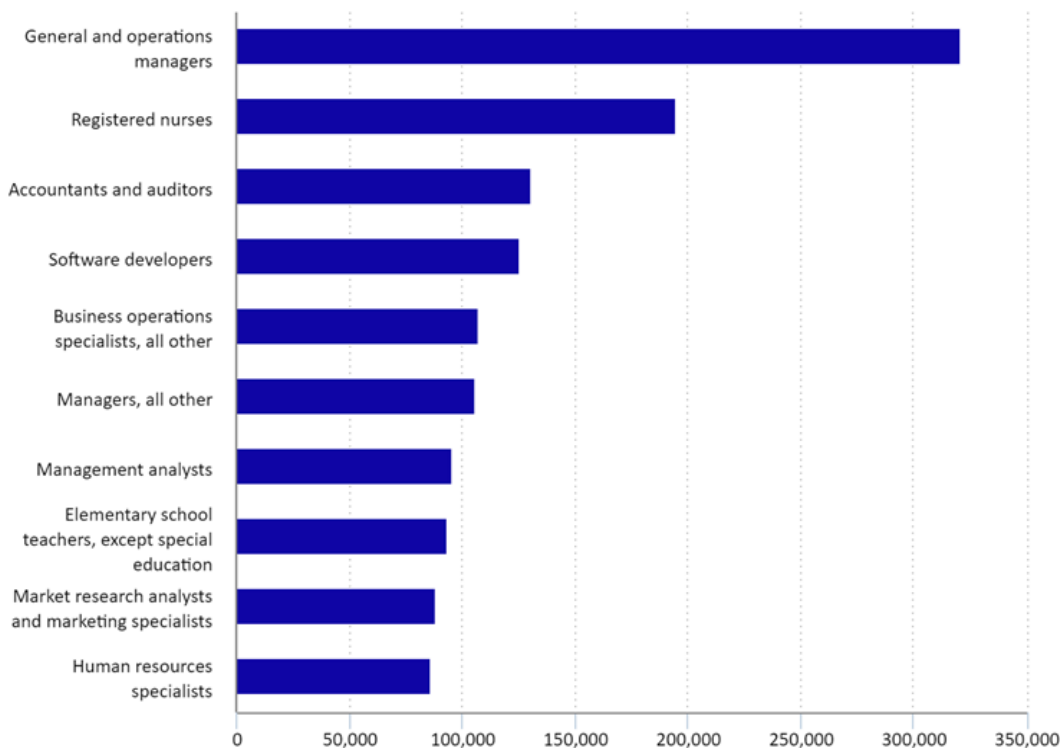
Heavy and tractor-trailer truck drivers is 1 of 2 occupations in chart 3—the other being licensed practical and licensed vocational nurses—with wages that were higher than the median for all occupations. Almost three-quarters of occupations at these education levels had wages above the median. On-the-job training to attain competency is typically required for several of the occupations in the chart.



Bachelor’s degree

A bachelor’s degree is typically required for entry in 178 occupations. Chart 4 shows the occupations at this education level that are projected to have the most openings each year, on average, from 2023 to 2033.

Chart 4. Bachelor's degree to enter: Occupations projected to have the most openings each year, on average, 2023–33



Hover over chart to view data.

Note: None of the occupations in the table typically require on-the-job training for competency.

Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections.

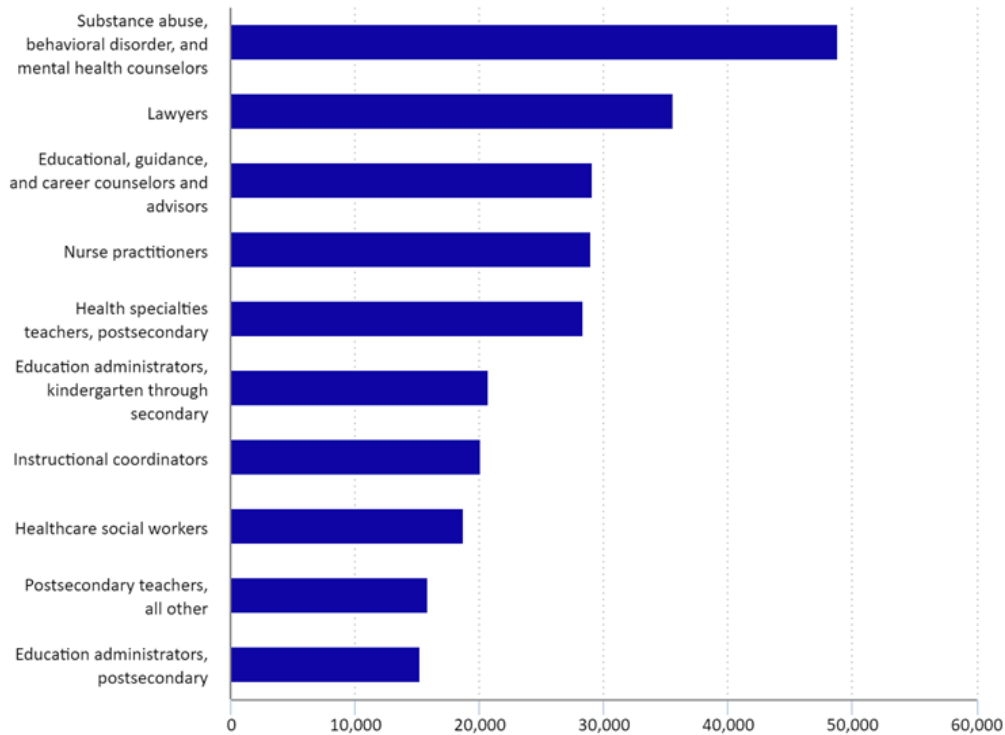
About 4 out of 10 openings projected in the bachelor’s-level group are in the occupations shown in chart 4. General and operations managers is projected to have the most openings (320,800) annually, on average, of any occupation that typically requires a bachelor’s degree for entry. Important skills for these managers include leadership, problem-solving and decision-making, and writing and reading.

Each of the occupations in chart 4 had wages that were higher than the median for all occupations. That’s not surprising, given that most occupations at this education level had wages higher than the median. Some of the occupations in the chart typically require work experience in a related occupation in addition to a bachelor’s degree, but none typically requires on-the-job training for workers to attain competency.

Graduate degree

In 40 occupations, a master’s degree is typically required for entry; 73 occupations typically require a doctoral or professional degree (such as a Ph.D. or J.D.). Chart 5 shows the 10 occupations at these education levels that are projected to have the most openings annually, on average, from 2023 to 2033.

Chart 5. Graduate degree to enter: Occupations projected to have the most openings each year, on average, 2023–33



Hover over chart to view data.

Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections.

The occupations in chart 5 account for about half of the openings projected in graduate-level occupations. With 48,900 openings each year, on average, from 2023 to 2033, substance abuse, behavioral disorder, and mental health counselors is projected to have more openings than any other occupation at these levels of education. These counselors usually need strong speaking and listening skills, interpersonal skills, and the ability to adapt.

Wages for each of the occupations in chart 5 were higher than the median for all occupations—and this holds true for almost all graduate-level occupations. In fact, the 15 occupations with the top-published median annual wage in 2023 (greater than or equal to \$239,200) typically require a doctoral or professional degree to enter. Although not shown in the chart, most of these were physicians and surgeons, a group of occupations that collectively is projected to have 23,600 openings each year, on average, over the 2023–33 decade.

For more information

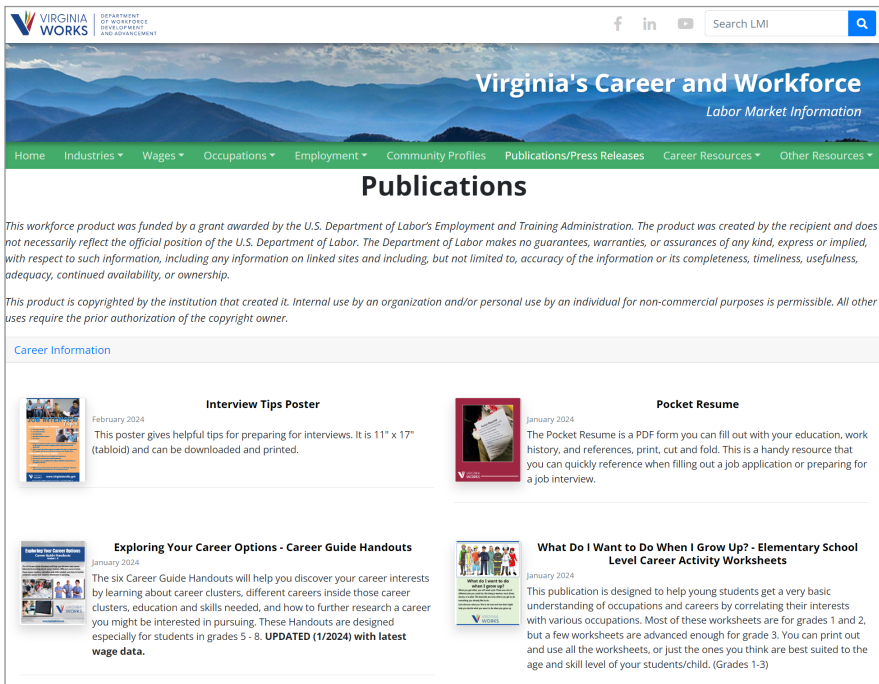
Learn more about the occupations in this article, and hundreds of others, in the Occupational Outlook Handbook (OOH). The OOH has information about what workers do, their work environment, pay, job outlook, and typical entry requirements.

Source: Elka Torpey, “Education level and projected openings, 2023–33,” Career Outlook, U.S. Bureau of Labor Statistics, August 2024.

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	<p>Statewide Economic Analysis Report - Program Year 2022 - 2023 October 2023 The Statewide Economic Analysis (SEA) Report is an annual product from the Virginia Employment Commission. It explores trends in several economic indicators including labor force demographics, GDP and populations. The report provides information and analysis at both the state and local workforce development areas.</p>		<p>Virginia Occupational Career Resource Guide - 3rd Edition August 2023 UPDATED 3rd EDITION The Virginia Occupational Career Resource Guide is produced by the Virginia Employment Commission to assist students and any other persons who are looking for information to aid them in researching and finding a new career. Information is provided on a variety of career choices, how to plan for a career, education needed to qualify for various jobs, how to apply and interview for jobs, and much more. (The 3rd edition has been updated to include the 2021-2031 occupational projections and the latest wage data from May 2021.)</p>

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