

Workforce Outcomes in Maryland: Patterns among Students by Achievement Level

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- Health, Crime, & Welfare Costs
 - The financial burden of **health**-related losses for high school dropouts totaled \$58 billion, despite shorter life expectancies (Levin, 2005).
 - The lifetime fiscal burden of crime per opportunity youth is \$13,700,
 which amounts to \$92.4 billion across a cohort (Belfield, Levin, & Rosen, 2012).
 - Over the lifetime, a high school dropout will receive \$9,660 more in welfare payments than a high school graduate. The aggregate burden is \$65.1 billion (Belfield, Levin, & Rosen, 2012).



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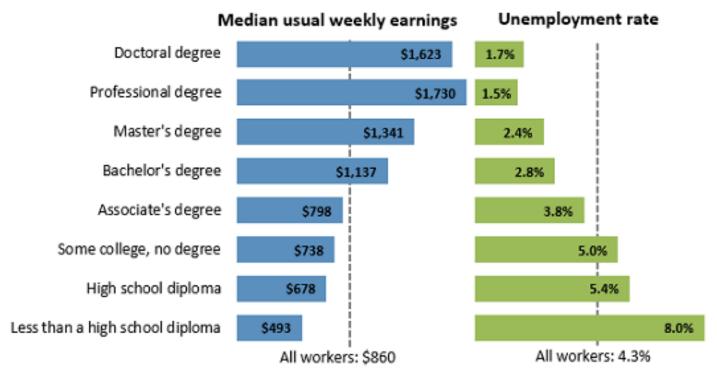
Introduction (2 of 3): <u>Need for Understanding Workforce Outcomes</u>

- Non-Completion Affects Marginalized Social Groups Disproportionately
 - High school dropouts are more likely to be male, African American or Hispanic, receive welfare, and have a family income less than \$20,000, and live in a non-metropolitan area (Maynard, Salas-Wright, & Vaughn, 2014).
- Less Revenue Generated (i.e., income lost)
 - Loss calculations have varied from \$235,680 (Belfield, Levin & Rosen,
 2012) to \$260,000 (Rouse, 2005) per high school dropout over a lifetime.
 - Annually, losses exceed \$50 billion for all high school dropouts ages 18-67 (Levin, 2005).





Earnings and unemployment rates by educational attainment, 2015



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers. Source: U.S. Bureau of Labor Statistics, Current Population Survey



Research Questions

- What are the patterns in total wages among students by achievement type between 2010-2014?
- What are the annualized and four-quarter wages among students by top 4 industries between 2010-2014?
- What are the wages by industry for students who do not attend college AND who earned a high school diploma, a certificate of completion, a GED, or who did not complete high school in 2010?



Population

- N = 67,267 (12th graders or GED earners in CY 2010)
- 28% not found in college
- 75% found in wage data, resulting in n = **13,947 students**



Measures: Achievement Type

- Diploma (n = 9,614)
- GED (n = 1,244)
- Certificate of Completion (n = 330)
- Non-Completers (n = 2,779)



Method for Calculating Wages

- Annualized or four-quarter wages as outcome
 - Annualized: If \$500 is reported for Q1, then \$2,000 is reported for the year
 - Four-Quarter: \$1,500 (Q1) + \$2,000 (Q2) + \$500 (Q3) + \$1,500 (Q4) = \$5,500



Measures: Wages (Annualized vs. Four-Quarter)

Annualized

- Pros: Annualized data retains all individuals who earned any amount of wages
- Cons: Is a calculated estimate

Four-Quarter

- Pros: All wages are "real" numbers
- Cons: Summing wage quarters drops individuals who did not report wages for all four quarters



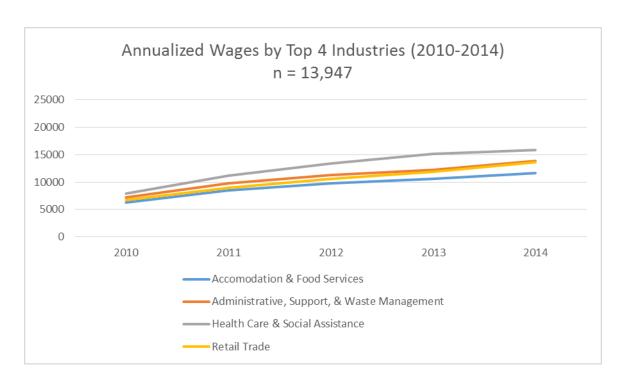
Results (1 of 6):

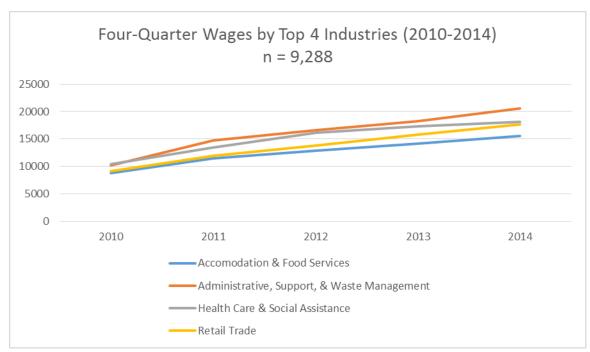
| Wage Data | | CY 2010 | | CY 2011 | | CY 2012 | | CY 2013 | | CY 2014 | |
|---------------------------|--------|---------|----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| - Annualized Wages | People | n | \$ | n | \$ | n | \$ | n | \$ | n | \$ |
| | | | | | | | | | | | |
| Total | 13,947 | 8,739 | 7,183.44 | 9,664 | 10,289.36 | 9,950 | 12,367.68 | 10,045 | 14,210.58 | 9,871 | 16,316.14 |
| Certificate of Completion | 310 | 168 | 4,791.33 | 187 | 5,690.44 | 198 | 6,097.46 | 189 | 7,821.06 | 199 | 8,267.05 |
| | | | | | | | | | | | |
| Diploma | 9,614 | 6,377 | 7,326.77 | 6,990 | 10,983.42 | 7,063 | 13,403.58 | 7,124 | 15,431.15 | 6,994 | 17,833.49 |
| | | | | | | | | | | | |
| GED | 1,244 | 750 | 8,088.96 | 844 | 9,912.53 | 870 | 11,578.24 | 839 | 13,621.56 | 792 | 15,803.71 |
| | | | | | | | | | | | |
| Non-completers | 2,779 | 1,444 | 6,358.47 | 1,643 | 8,053.53 | 1,819 | 9,405.52 | 1,893 | 10,516.19 | 1,886 | 11,753.73 |

| Wage Data | CY 2010 | | СҮ | CY 2011 | | CY 2012 | | CY 2013 | | CY 2014 | |
|---------------------------|---------|-------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| - Four-Quarter Wages | People | n | \$ | n | \$ | n | \$ | n | \$ | n | \$ |
| | | | | | | | | | | | |
| Total | 9,288 | 2,862 | 9,828.67 | 4,508 | 13,917.01 | 5,463 | 16,388.30 | 5,820 | 18,495.67 | 5,779 | 20,940.26 |
| Certificate of Completion | 182 | 64 | 7,767.02 | 103 | 7,267.97 | 100 | 7,361.98 | 118 | 8,594.45 | 131 | 9,874.74 |
| | | | | | | | | | | | |
| Diploma | 6,856 | 2,196 | 9,586.44 | 3,493 | 14,330.24 | 4,193 | 17,108.33 | 4,407 | 19,453.71 | 4,351 | 22,235.28 |
| | | | | | | | | | | | |
| GED | 731 | 207 | 12,352.26 | 323 | 14,461.67 | 381 | 16,594.90 | 395 | 19,127.29 | 391 | 21,177.85 |
| | | | | | | | | | | | |
| Non-completers | 1,519 | 395 | 10,186.93 | 589 | 12,330.47 | 789 | 13,606.11 | 900 | 14,825.45 | 906 | 16,218.43 |



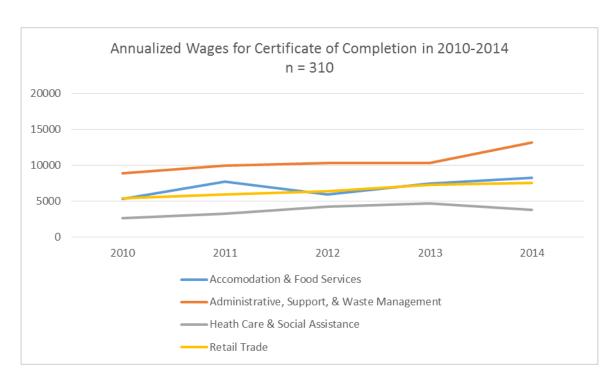
Results (2 of 6): All Achievements

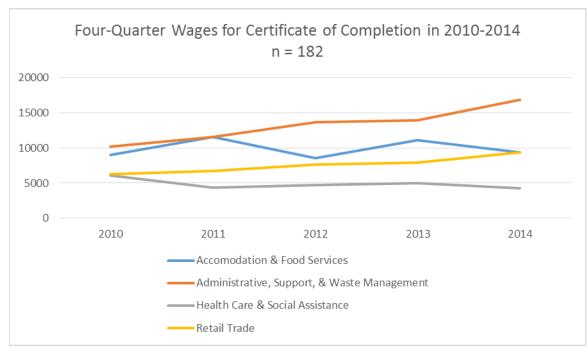






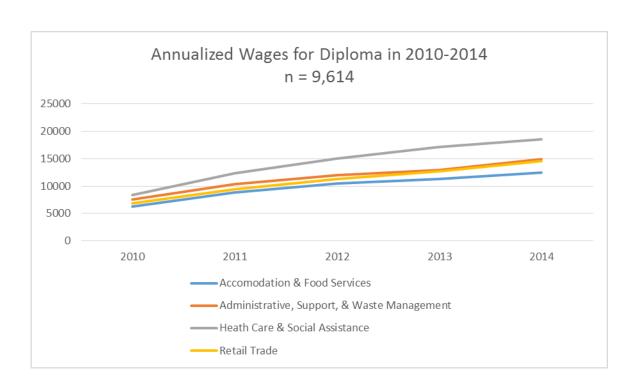
Results (3 of 6): Certificate of Completion

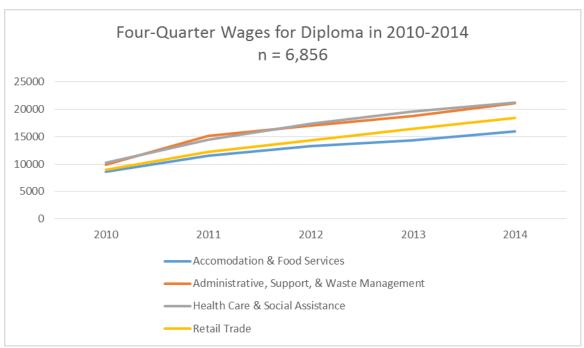






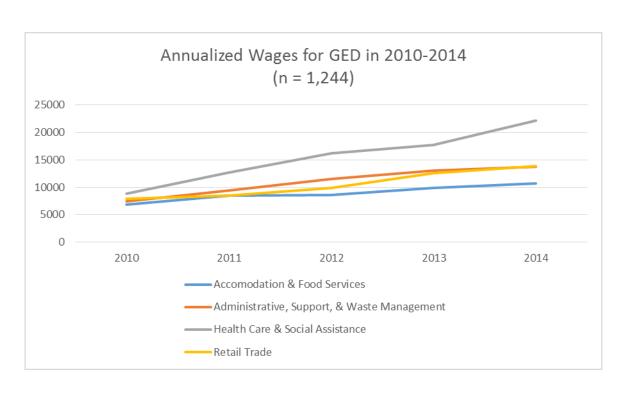
Results(4 of 6): Diploma

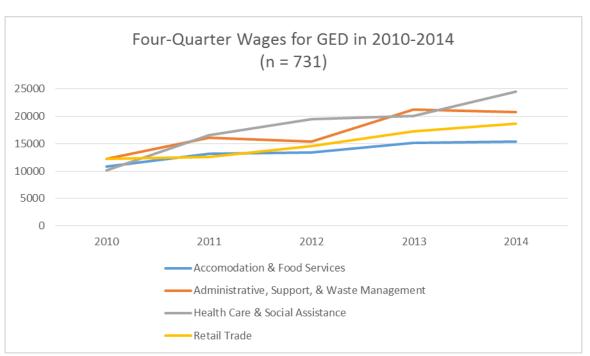






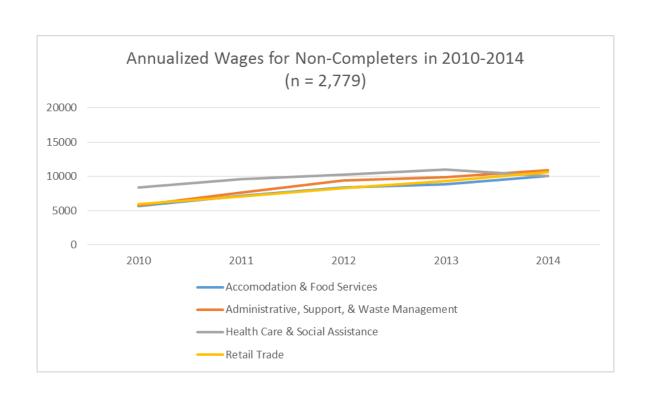
Results (5 of 6): GED

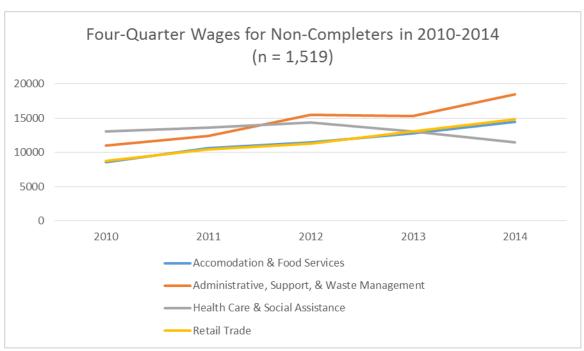






Results (6 of 6): Non-Completers







Summary of Results

- Diploma, GED, and non-completers earned the most in Health Care & Social Assistance, then Administrative, Support, & Waste Management, Retail Trade, and Accommodation & Food Services
- Certificate of Completion students earned the most in Administrative,
 Support, & Waste Management, then Accommodation & Food Services,
 Retail Trade, and Health Care & Social Assistance
- Healthcare earnings vary by achievement, with certificate of completion earning the least and GED earning the most
- Retail earnings are similar across all achievements



Discussion

- Need transparency about reporting four-quarter versus annualized data—four-quarter data will yield higher earnings!
- Obtaining a GED or diploma will yield almost equivalent wages over time
- Certificate of Completion students have the worst workforce outcomes
- Overall, the wage trends are a steady increase, with GED and certificate of completion earners showing the most variability



<u>Implications & Future Directions</u>

- Encourage students to graduate with a diploma
 - Increasing the high school completion rate by one percent for men ages 20-60 would save \$1.4 billion per year in reduced crime costs (Levin, 2005).
- Reach non-completers to enroll in GED programs
- Policy intervention for students who graduate with a certificate of completion
- Need to examine minority social groups and their rates of educational achievement and workforce outcomes



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