

Workforce Outcomes in Maryland: Patterns among Students by Achievement Level

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<https://mldscenter.maryland.gov/>

Introduction (1 of 3): Need for Understanding Workforce Outcomes

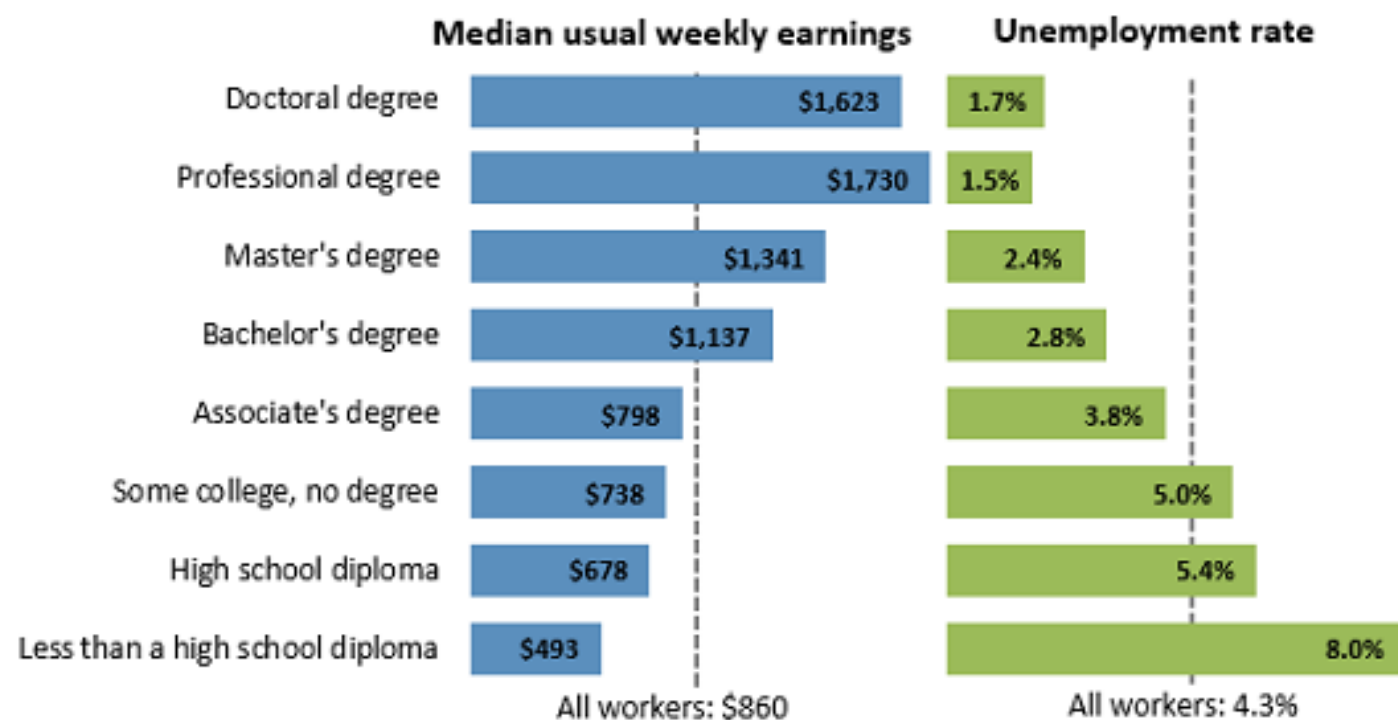
- Health, Crime, & Welfare Costs
 - The financial burden of **health**-related losses for high school dropouts totaled \$58 billion, despite shorter life expectancies (Levin, 2005).
 - The lifetime fiscal burden of **crime** per opportunity youth is \$13,700, which amounts to \$92.4 billion across a 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).

Introduction (2 of 3): Need for Understanding Workforce Outcomes

- 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).

Introduction (3 of 3): National Workforce Rate by Achievement

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

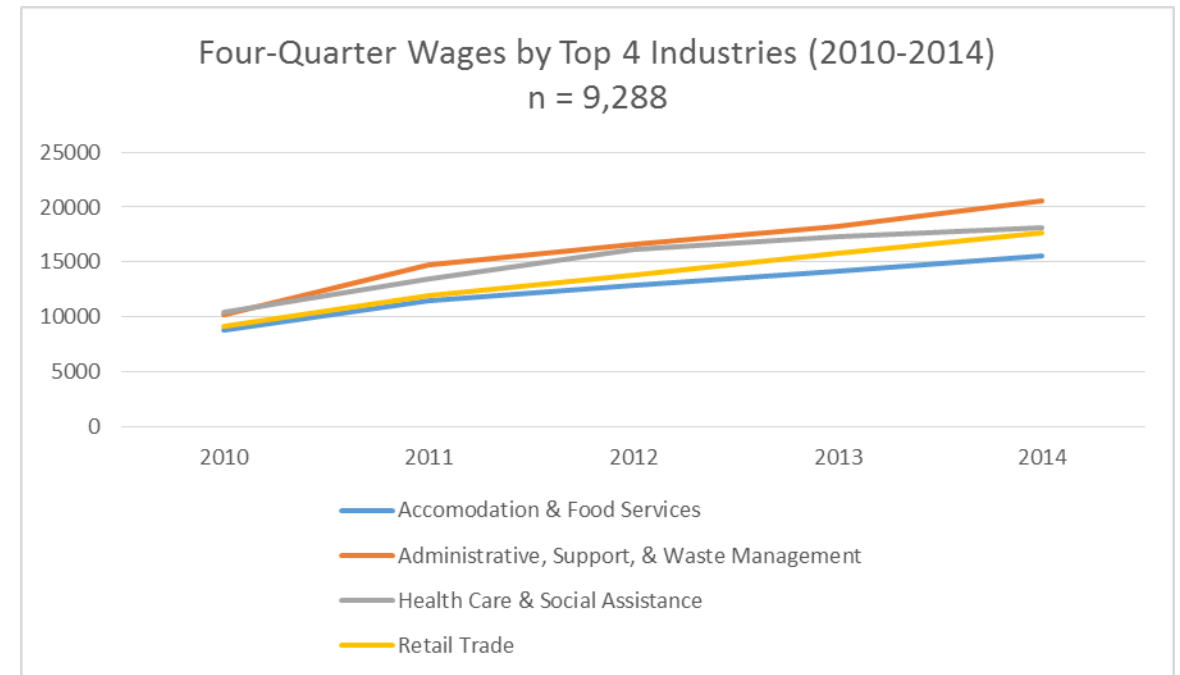
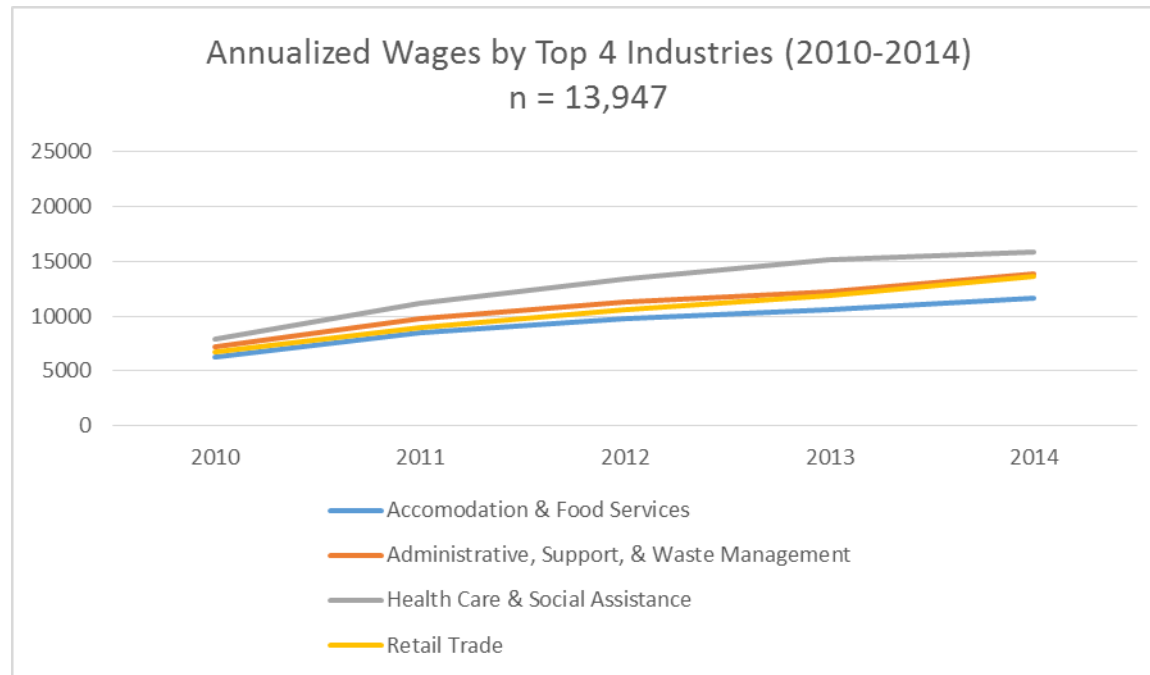
Results (1 of 6):

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			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

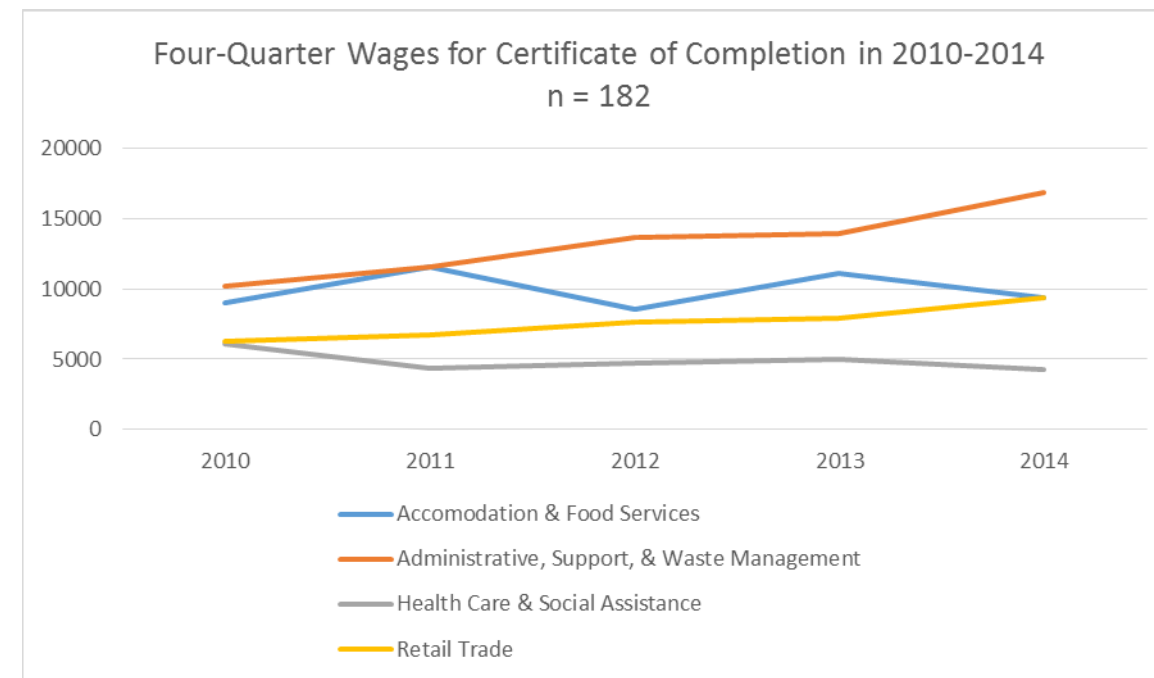
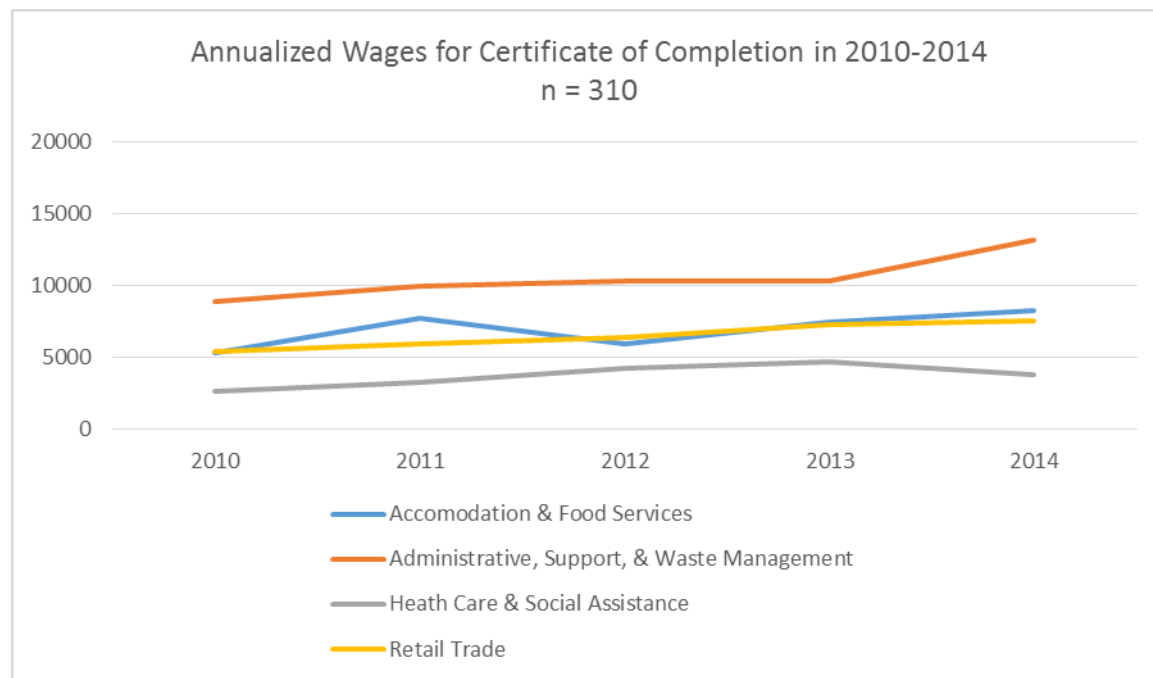
Note: MLDS Draft-- as of 6/2/2016

Results (2 of 6): All Achievements



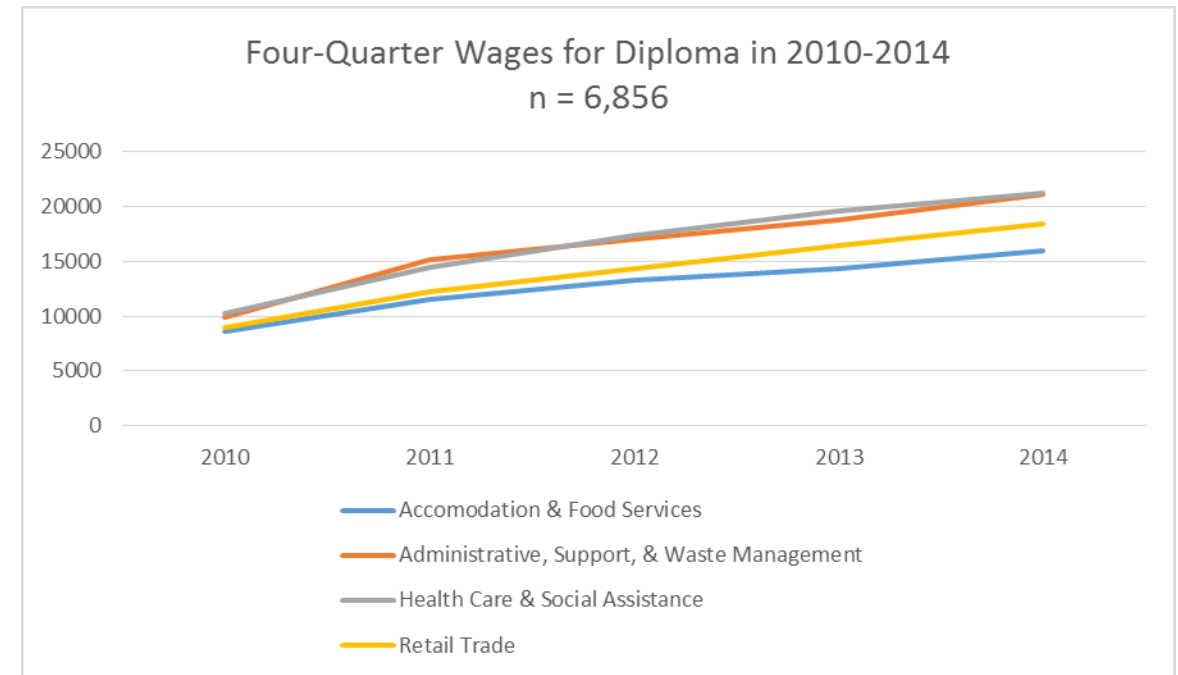
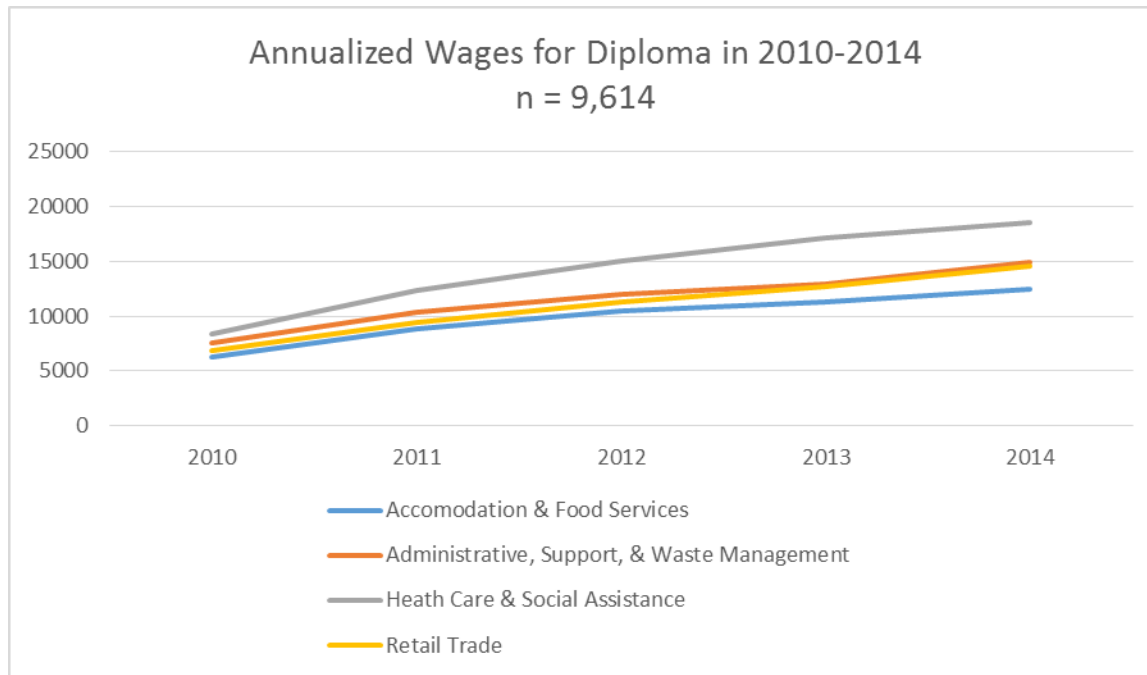
Note: MLDS Draft-- as of 6/2/2016

Results (3 of 6): Certificate of Completion



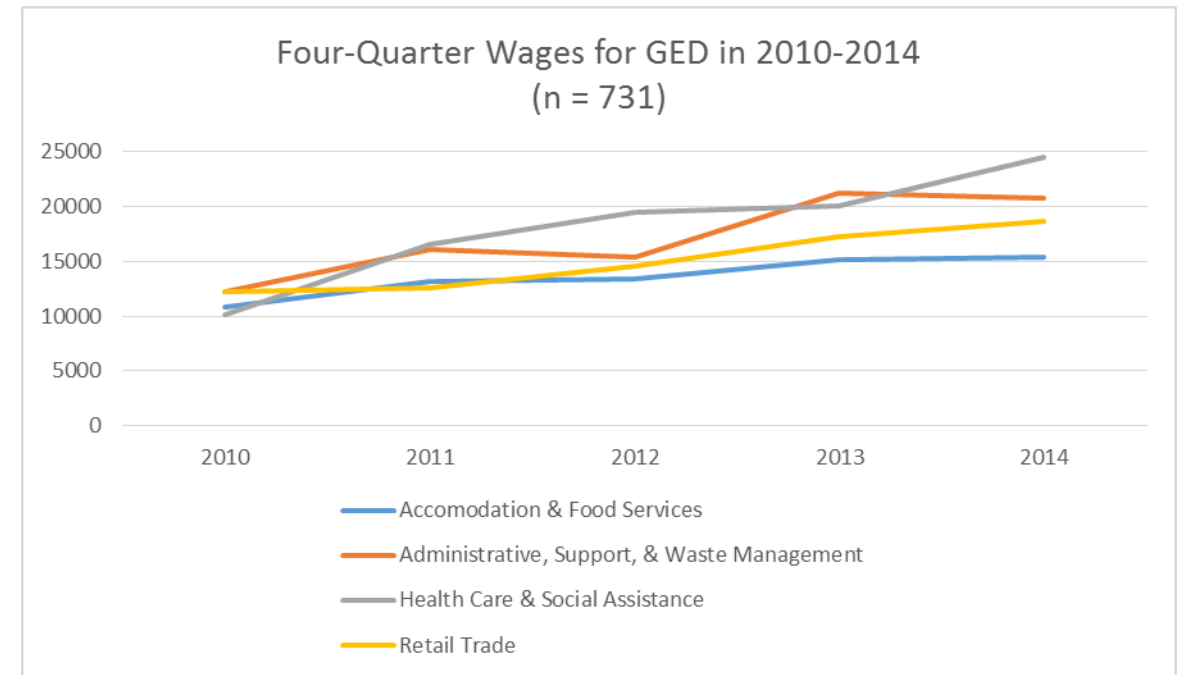
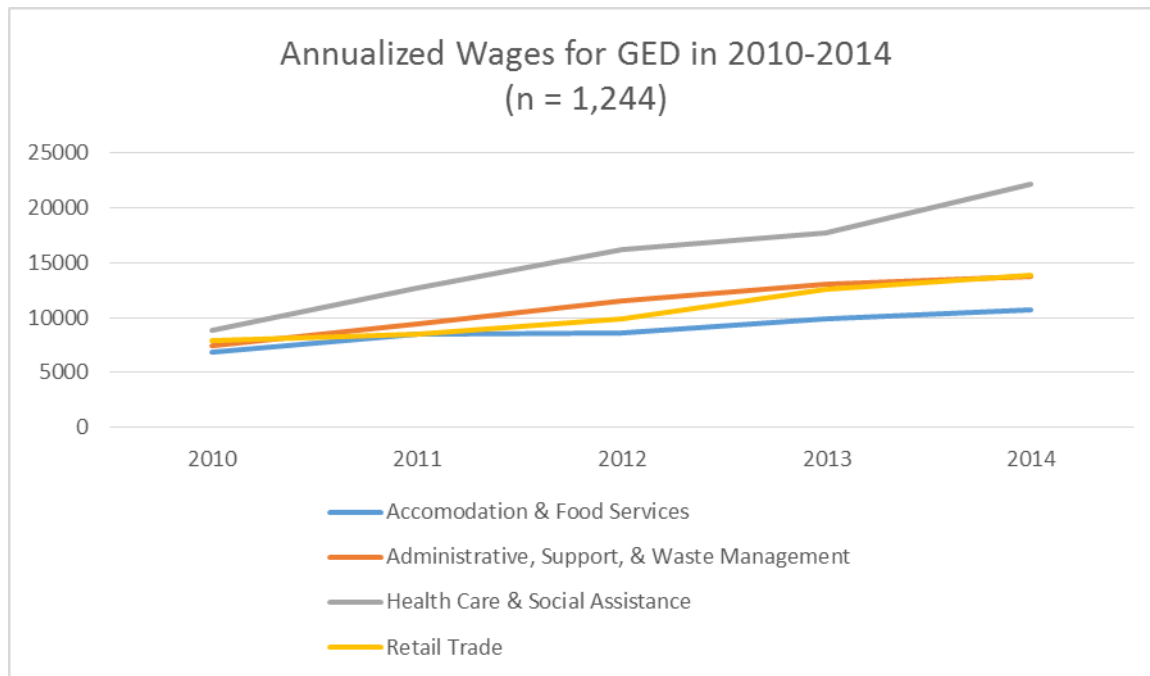
Note: MLDS Draft-- as of 6/2/2016

Results(4 of 6): Diploma



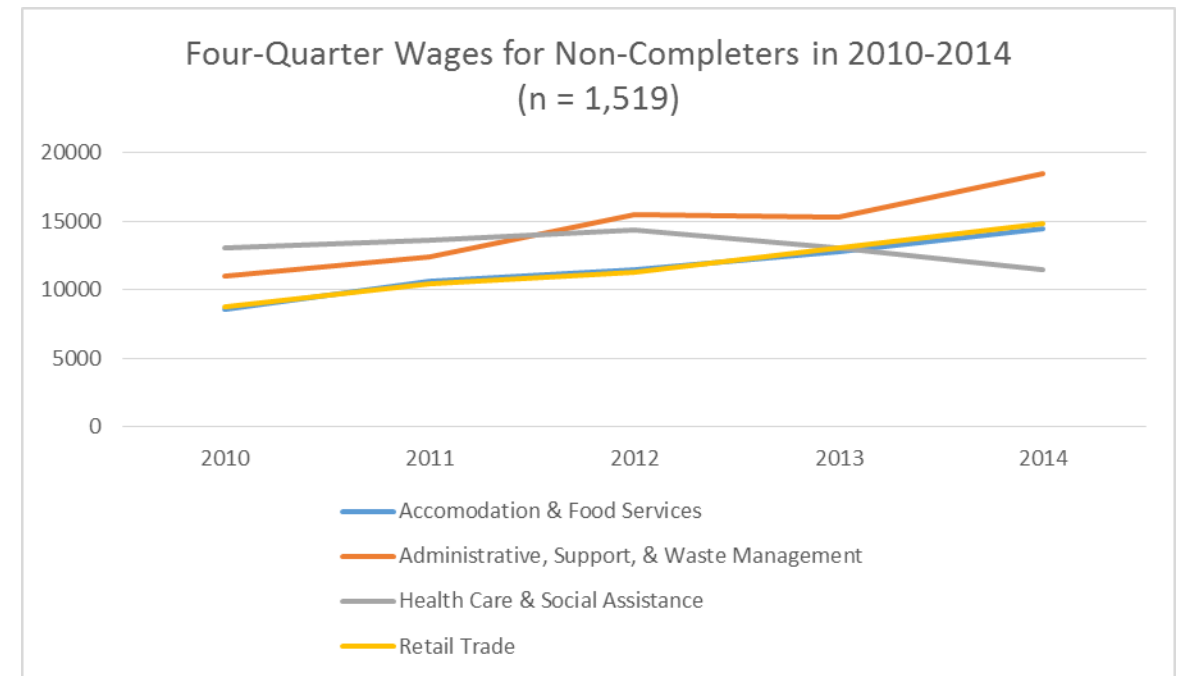
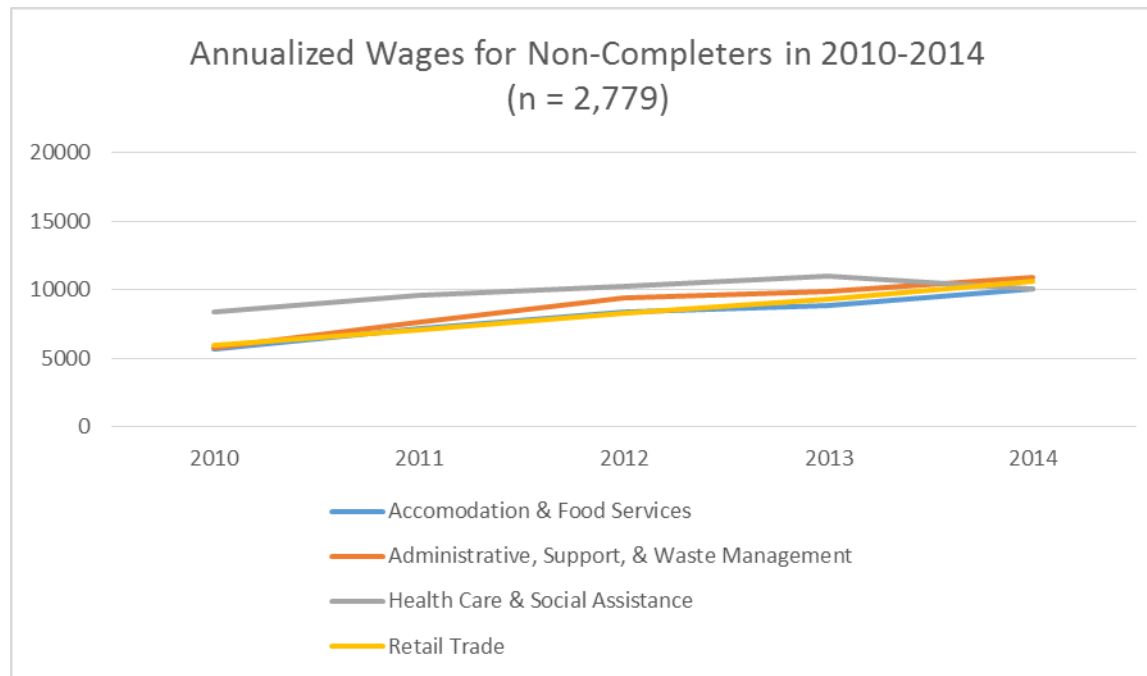
Note: MLDS Draft-- as of 6/2/2016

Results (5 of 6): GED



Note: MLDS Draft-- as of 6/2/2016

Results (6 of 6): Non-Completers



Note: MLDS Draft-- as of 6/2/2016

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

Implications & Future Directions

- 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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The MLDS Center is an independent agency of the State of Maryland. The mission of the Center is to develop and maintain the Maryland Longitudinal Data System in order to provide analyses, produce relevant information, and inform choices to improve student and workforce outcomes in the State of Maryland.