

# Oklahoma Job Quarterly Earnings Percentile Changes Health Years 2005 to 2015



# OKLAHOMA

Oklahoma Employment Security Commission  
Economic Research and Analysis Division

# **Oklahoma Job Quarterly Earnings Percentile Changes Health Years: 2005 to 2015**

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## Oklahoma Job Quarterly Earnings Percentile Health Changes: 2005 to 2015

### I. Introduction

In the most recently released 2014 Quarterly Census of Employment and Wages (QCEW) Oklahoma’s health industry is first in number of employees (13% of the total employment) and largest in total annual payroll (\$9,123,782,431). Growth in the number of health employees in the previous ten years was 14.1%. The health industry’s employment, including social assistance, is projected to increase by 21.9% between the years 2012 – 2022, due mostly to Oklahoma’s demographically aging population. Therefore, an analysis of the percentile earnings changes in Oklahoma’s health industry provides an important indicator of economic and business trends, as well as job growth for the state.

In this report we used our agency’s administrative earnings records to construct a 10-year history of health job earnings percentile changes, as it was previously done for an aggregate of all Oklahoma industries and for the mining industry. One difference in this report from the previous two reports is that the 3-digit NAICS 624 Social Assistance will be omitted from 2-digit NAICS 62 Health Care and Social Assistance. Thus a modified ‘health’ industry is reported, consisting of 3-digit NAICS 621 Ambulatory Health Care Services, 622 Hospitals and 623 Nursing and Residential Care Facilities.

The data set is by job, not by individual. Consequently, if a person works two part-time jobs, then the two part-time jobs would each show up separately. In addition, jobs with earnings less than \$300 were excluded for the reference quarter. The data for 2<sup>nd</sup> quarter job quarter earnings for the years 2005 and 2015 and a number of years between are included, but the data set does not include federal jobs.

### II. Health Percentile Job Quarterly Earnings, 1-Year Changes: 2011 to 2015

Table 1 shows the job quarterly earnings and percentile change for Health between the 2<sup>nd</sup> quarter of 2011 and the 2<sup>nd</sup> quarter of 2012.

**Table 1. Health: Job Quarterly Earnings by Percentile: 2011 to 2012**

Percentile	2011	2012	Number Change	Percent Change
5th	\$763	\$746	-\$17	-2.2
10th	\$1,319	\$1,292	-\$27	-2.0
20th	\$2,672	\$2,608	-\$64	-2.4
25th	\$3,390	\$3,340	-\$50	-1.5
30th	\$4,027	\$4,015	-\$12	-0.3
40th	\$5,121	\$5,128	\$7	0.1
50th	\$6,263	\$6,250	-\$13	-0.2
60th	\$7,646	\$7,665	\$19	0.2
70th	\$9,639	\$9,681	\$42	0.4
75th	\$11,008	\$11,038	\$30	0.3
80th	\$12,625	\$12,594	-\$31	-0.2
90th	\$17,380	\$17,308	-\$73	-0.4
95th	\$23,528	\$23,585	\$57	0.2
99th	\$73,971	\$75,000	\$1,029	1.4
<b>Total Jobs</b>	<b>183,463</b>	<b>187,664</b>	<b>4,201</b>	<b>2.3</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

On the previous page, Table 1 displays the health job percentile earnings changes from 2011 to 2012, revealing that all of the percentile earnings changes were relatively small. The dollar amount earnings change was under \$75, with the exception of the 99th percentile. However the largest percent amount change was -2.4% in the 20<sup>th</sup> percentile. Eight of the percentile changes were negative in direction, while six were positive in direction.

**Table 2. Health: Job Quarterly Earnings by Percentile: 2012 to 2013**

Percentile	2012	2013	Number Change	Percent Change
5th	\$746	\$790	\$44	5.9
10th	\$1,292	\$1,384	\$92	7.1
20th	\$2,608	\$2,861	\$253	9.7
25th	\$3,340	\$3,619	\$279	8.4
30th	\$4,015	\$4,288	\$273	6.8
40th	\$5,128	\$5,411	\$283	5.5
50th	\$6,250	\$6,566	\$316	5.1
60th	\$7,665	\$8,018	\$353	4.6
70th	\$9,681	\$10,109	\$428	4.4
75th	\$11,038	\$11,501	\$463	4.2
80th	\$12,594	\$13,071	\$477	3.8
90th	\$17,308	\$17,940	\$632	3.7
95th	\$23,585	\$24,600	\$1,015	4.3
99th	\$75,000	\$77,911	\$2,911	3.9
<b>Total Jobs</b>	<b>187,664</b>	<b>186,551</b>	<b>-1,113</b>	<b>-0.6</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

As shown in above in Table 2, the dollar amount and percent job earnings changes from 2012 to 2013 were all positive. The largest dollar amount change is \$2,911 in the 99<sup>th</sup> percentile. The largest percent change was 9.7% in the 20<sup>th</sup> percentile. All of the larger percent earnings changes were in the lower seven percentile levels.

**Table 3. Health: Job Quarterly Earnings by Percentile: 2013 to 2014**

Percentile	2013	2014	Number Change	Percent Change
5th	\$790	\$798	\$8	1.0
10th	\$1,384	\$1,409	\$25	1.8
20th	\$2,861	\$2,954	\$93	3.3
25th	\$3,619	\$3,732	\$113	3.1
30th	\$4,288	\$4,417	\$129	3.0
40th	\$5,411	\$5,607	\$196	3.6
50th	\$6,566	\$6,816	\$250	3.8
60th	\$8,018	\$8,320	\$302	3.8
70th	\$10,109	\$10,490	\$381	3.8
75th	\$11,501	\$11,885	\$384	3.3
80th	\$13,071	\$13,540	\$469	3.6
90th	\$17,940	\$18,655	\$715	4.0
95th	\$24,600	\$26,346	\$1,746	7.1
99th	\$77,911	\$80,210	\$2,299	3.0
<b>Total Jobs</b>	<b>186,551</b>	<b>184,670</b>	<b>-1,881</b>	<b>-1.0</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

As revealed in Table 3 shown on previous page, the dollar amount and percent job earnings percentile changes from 2013 to 2014 were lower than the previous year. The 99<sup>th</sup> percentile had the largest dollar amount earnings change of \$2,299, while the 95<sup>th</sup> percentile had the second largest of \$1,746. The 95<sup>th</sup> percentile also had the largest percent earnings change of 7.1%. The 20<sup>th</sup> through the 90<sup>th</sup> percentiles had earnings percent changes ranging from 3.0% in the 30<sup>th</sup> percentile to 4.0% in the 90<sup>th</sup> percentile.

**Table 4. Health: Job Quarterly Earnings by Percentile: 2014 to 2015**

Percentile	2014	2015	Number Change	Percent Change
5th	\$798	\$792	-\$6	-0.8
10th	\$1,409	\$1,411	\$2	0.1
20th	\$2,954	\$2,937	-\$17	-0.6
25th	\$3,732	\$3,732	\$0	0.0
30th	\$4,417	\$4,455	\$38	0.9
40th	\$5,607	\$5,680	\$73	1.3
50th	\$6,816	\$6,905	\$89	1.3
60th	\$8,320	\$8,427	\$107	1.3
70th	\$10,490	\$10,671	\$181	1.7
75th	\$11,885	\$12,082	\$197	1.7
80th	\$13,540	\$13,813	\$273	2.0
90th	\$18,655	\$19,100	\$445	2.4
95th	\$26,346	\$27,342	\$996	3.8
99th	\$80,210	\$83,545	\$3,335	4.2
<b>Total Jobs</b>	<b>184,670</b>	<b>182,923</b>	<b>-1,747</b>	<b>-0.9</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

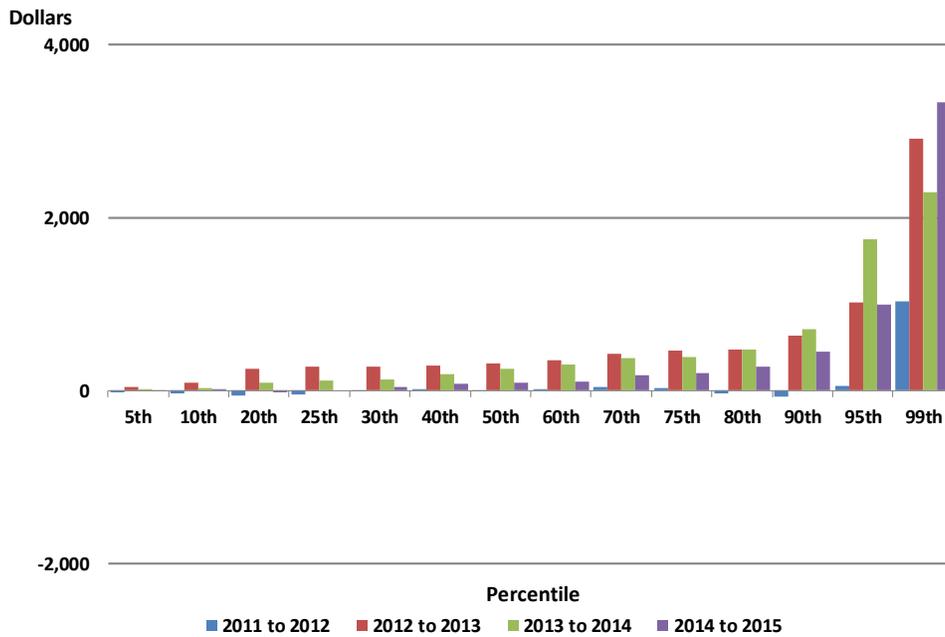
Note<sup>3</sup>: The unit of analysis is a job.

As shown above in Table 4, health job quarterly earnings changes for most percentiles during 2014 to 2015 were lower than in the previous two years. The largest dollar amount earnings change was \$3,335 in the 99<sup>th</sup> percentile, which also experienced the largest percent change in earnings. The 95<sup>th</sup> percentile was second in dollar amount earnings change and percent change. The 25<sup>th</sup> percentile had no change, while the 5<sup>th</sup> and 20<sup>th</sup> percentiles had small negative percent earnings change. The year 2014 to 2015 was more favorable positive for percentile both dollar amount and percent earnings increases than 2011 to 2012 (Table 1), but less favorable for these positive earnings changes than year 2012 to 2011 (Table 2) and year 2013 to 2014 (Table 3).

Another way to illustrate the health job quarterly earnings percentile change is with charts. Chart 1 (on the next page) illustrates the job quarterly earnings percentile changes for the interval 2011 to 2015, as outlined in Tables 1, 2, 3 and 4. However the tables should be consulted for exact numbers.

Chart 1 on the next page shows that the interval 2011 to 2012 was not a good year for job earnings increases, with both relatively small dollar earnings amount change and percent change. Eight out of the 14 percentiles experienced negative changes. The health job quarter percentile earnings experienced changes for the better during the three remaining periods 2012 to 2013, 2013 to 2014 and 2014 to 2015, with the best positive change in the 1-year interval of 2012 to 2013. The upper level percentiles of the 90<sup>th</sup>, 95<sup>th</sup> and 99<sup>th</sup> experienced larger dollar amount earnings changes than the lower percentiles in the latter three 1-year intervals. However the 99<sup>th</sup> percentile showed a drop in 2013 to 2014 and a rise again in the final year. This rise and then fall change was not experienced in the 90<sup>th</sup> and 95<sup>th</sup> percentiles.

**Chart 1. Health Job Quarterly Earnings Percentile Dollar Change Per Year: 2011 to 2015**



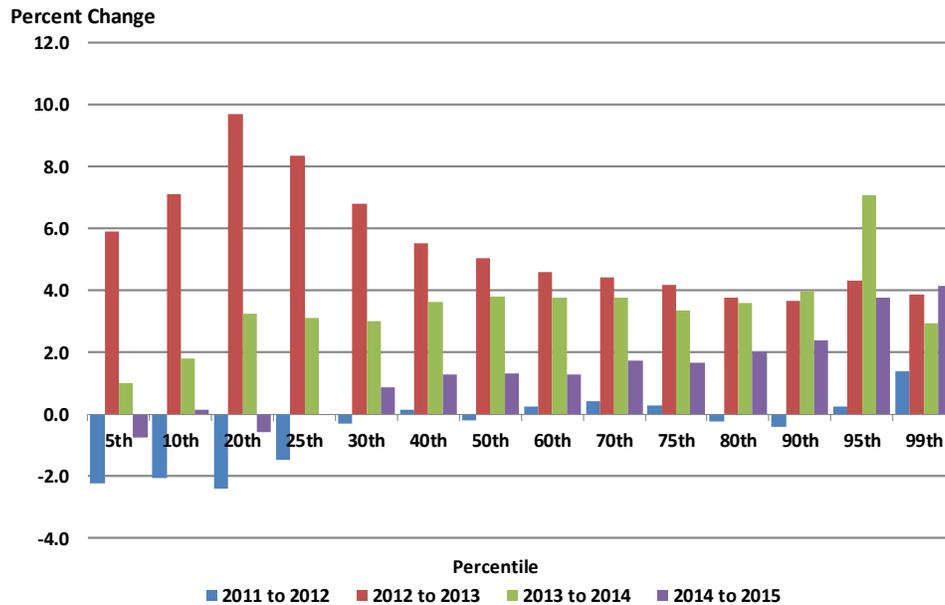
Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Chart 2 displays job quarterly earnings percent changes by percentile for health from 2011 to 2015.

**Chart 2. Health Job Quarterly Earnings Percentile Percent Change Per Year: 2011 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Chart 2 on the previous page shows that from 2011 to 2012 health job earnings percentile percent changed only slightly, with the largest changes being the 20<sup>th</sup> percentile with -2.45%, the 5<sup>th</sup> percentile with -2.0% and the 10<sup>th</sup> percentile with -2.0%. The interval 2012 to 2013 showed the most earnings change of all, with the 50<sup>th</sup> and lower level percentiles having the larger percent change of 5.1% to 9.7%. The following interval 2013 to 2014 was an interval of health percentile earnings increases, but with lower changes than its predecessor. The 40<sup>th</sup> and lower percentiles had the larger changes in interval 2013 to 2014, with the exception of the also large change in 99<sup>th</sup> percentile, which also occurred in that interval. In interval 2014 to 2015, percentiles 30<sup>th</sup> and higher had the larger earnings percent change.

### III. Health Percentile Job Quarterly Earnings, 3-Year Changes: 2006 to 2015

This section looks at job earnings changes for health in 3-year intervals falling within 2006 to 2015. The advantage of a 3-year interval analysis over a 1-year analysis is that it allows comparisons of job earnings changes before and after the most recent ‘Great Recession. Oklahoma’s entry and exit from this recession was somewhat delayed than that of other states. However, it fell within the same three year period of 2009 to 2012.

Table 5 (below) displays the job quarterly earnings percentile changes in dollars and percent for health between the 2<sup>nd</sup> quarter of 2006 and the 2<sup>nd</sup> quarter of 2009. It shows that during this 3-year interval, all health percentile levels had a vigorous dollar amount increase, with the amounts steadily increasing from an \$80 amount low in the 5<sup>th</sup> percentile to the \$8,566 amount high in the 99<sup>th</sup> percentile. The health earnings percent change ranged from the 5<sup>th</sup> percentile’s 12.2% to the high of 14.7% at the 20<sup>th</sup> percentile level. The lower level 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup> percentiles and the highest 99<sup>th</sup> percentile had the largest percent change.

**Table 5. Health: Job Quarterly Earnings in 3-Year Interval by Percentile: 2006 to 2009**

Percentile	2006	2009	Number Change	Percent Change
5th	\$655	\$735	\$80	12.2
10th	\$1,093	\$1,246	\$153	14.0
20th	\$2,159	\$2,499	\$340	15.7
25th	\$2,770	\$3,177	\$407	14.7
30th	\$3,320	\$3,803	\$483	14.5
40th	\$4,307	\$4,889	\$582	13.5
50th	\$5,282	\$5,984	\$703	13.3
60th	\$6,428	\$7,279	\$851	13.2
70th	\$8,040	\$9,121	\$1,081	13.4
75th	\$9,183	\$10,420	\$1,237	13.5
80th	\$10,613	\$11,985	\$1,372	12.9
90th	\$14,754	\$16,560	\$1,806	12.2
95th	\$19,494	\$22,177	\$2,683	13.8
99th	\$60,000	\$68,566	\$8,566	14.3
<b>Total Jobs</b>	<b>169,676</b>	<b>179,062</b>	<b>9,386</b>	<b>5.5</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

On the following page, Table 6 displays the quarterly earnings percentile changes for health for the 3-year period from 2009 to 2012, which includes the recent recession.

**Table 6. Health: Job Quarterly Earnings in 3-Year Interval by Percentile: 2009 to 2012**

Percentile	2009	2012	Number Change	Percent Change
5th	\$735	\$746	\$11	1.5
10th	\$1,246	\$1,292	\$46	3.7
20th	\$2,499	\$2,608	\$109	4.4
25th	\$3,177	\$3,340	\$163	5.1
30th	\$3,803	\$4,015	\$212	5.6
40th	\$4,889	\$5,128	\$239	4.9
50th	\$5,984	\$6,250	\$266	4.4
60th	\$7,279	\$7,665	\$386	5.3
70th	\$9,121	\$9,681	\$560	6.1
75th	\$10,420	\$11,038	\$618	5.9
80th	\$11,985	\$12,594	\$609	5.1
90th	\$16,560	\$17,308	\$748	4.5
95th	\$22,177	\$23,585	\$1,408	6.3
99th	\$68,566	\$75,000	\$6,434	9.4
<b>Total Jobs</b>	<b>179,062</b>	<b>187,664</b>	<b>8,602</b>	<b>4.8</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Table 6 (above) shows health's job earnings changes in the 3-year interval that includes the recent recession and recovery, 2009 to 2012. Both the job earnings dollar amounts and the percent changes are not as robust as in the previous 3-year period. However, all are positive and reveal a respectable positive increase. The 99<sup>th</sup> percentile had both the largest dollar amount increase of \$6,434 and percent change of 9.4%.

**Table 7. Health: Job Quarterly Earnings in 3-Year Interval by Percentile: 2012 to 2015**

Percentile	2012	2015	Number Change	Percent Change
5th	\$746	\$792	\$46	6.2
10th	\$1,292	\$1,411	\$119	9.2
20th	\$2,608	\$2,937	\$329	12.6
25th	\$3,340	\$3,732	\$392	11.7
30th	\$4,015	\$4,455	\$440	11.0
40th	\$5,128	\$5,680	\$552	10.8
50th	\$6,250	\$6,905	\$655	10.5
60th	\$7,665	\$8,427	\$762	9.9
70th	\$9,681	\$10,671	\$990	10.2
75th	\$11,038	\$12,082	\$1,044	9.5
80th	\$12,594	\$13,813	\$1,219	9.7
90th	\$17,308	\$19,100	\$1,792	10.4
95th	\$23,585	\$27,342	\$3,757	15.9
99th	\$75,000	\$83,545	\$8,545	11.4
<b>Total Jobs</b>	<b>187,664</b>	<b>182,923</b>	<b>-4,741</b>	<b>-2.5</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

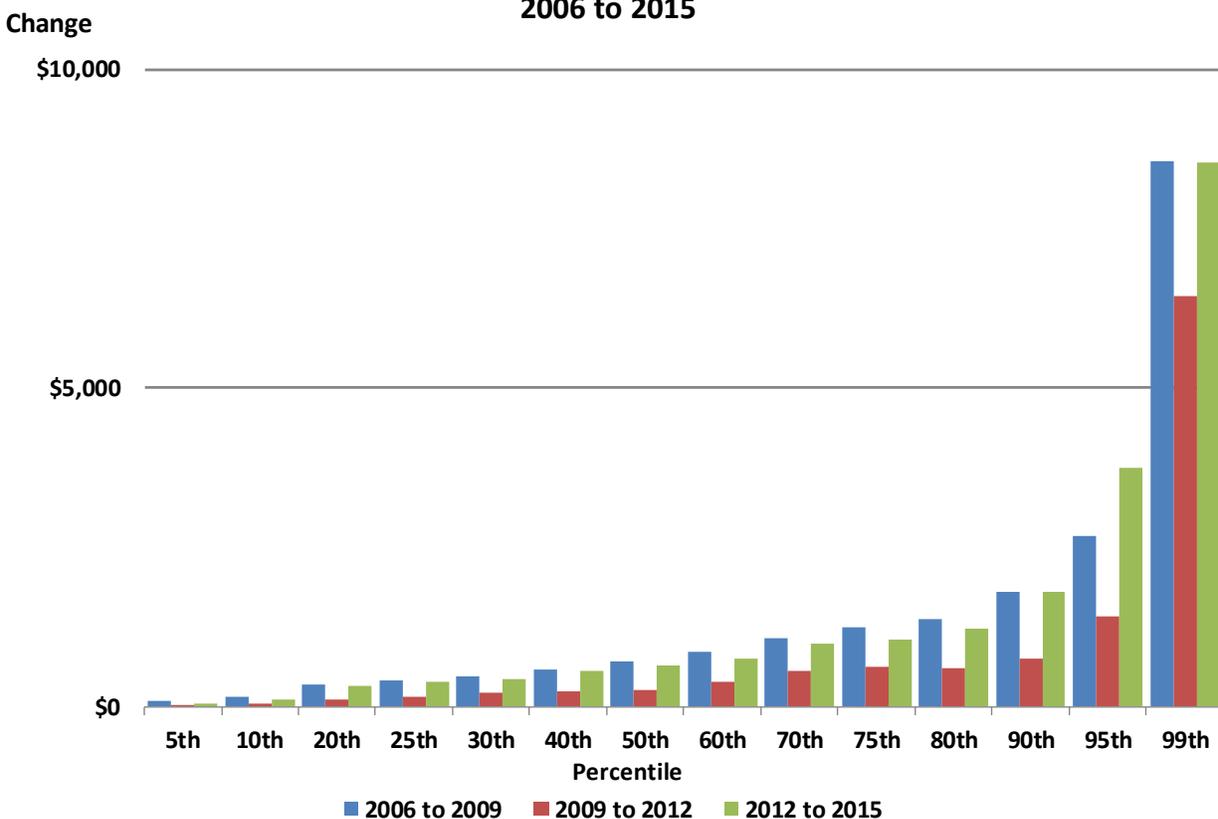
Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

On the previous page, Table 7 displays the health job quarterly earnings percentile changes for the three years after the recent recession from 2012 to 2015. All percentiles experienced an improvement over the previous year, with both positive dollar amount increases and percent increases. Only the 5<sup>th</sup> percentile had percent changes less than 9%. The 95<sup>th</sup> percentile had the largest percent change of 15.9%, while the 20<sup>th</sup> percentile had the second largest percent change of 12.6%. However the changes in this 3-year period were not as great as for the first and prior to recession 3-year period of 2006 to 2009.

Two visual representations—in the form of graphs—are displayed below and on the following page. These graphs illustrate the dollar amount and percent changes in each of the 3-year intervals, 2006 to 2015. Chart 3 (below) shows the health job earnings dollar amount changes for each of the three 3-year intervals, from 2006 to 2015, as outlined in Tables 5, 6, and 7 (consult tables for exact numbers).

**Chart 3. Health Job Quarterly Earnings Percentile Dollar Change, 3-Year Intervals: 2006 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

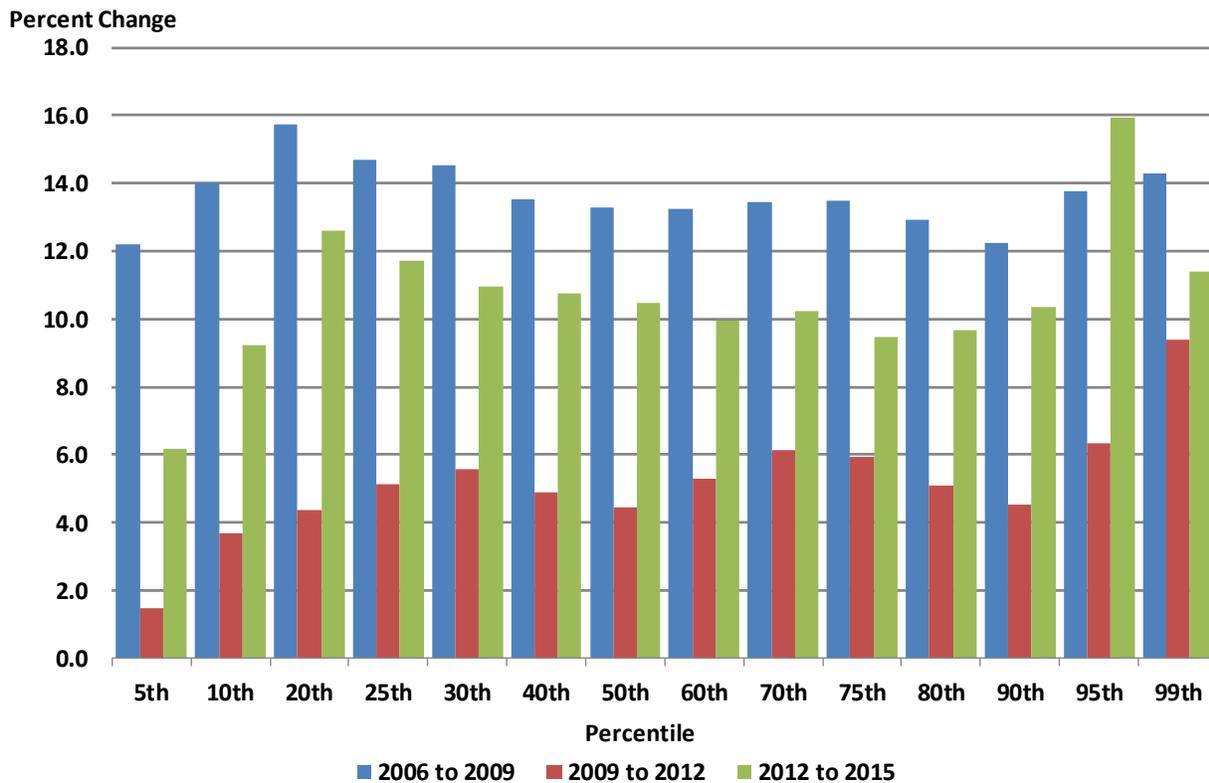
In all three of the 3-year intervals, the smallest dollar amount increases in earnings were in lower percentile levels, with the amounts increasing with percentile levels. The 3-year interval from 2009 to 2012 shows the dollars amount increases were less than the previous year's for all percentiles. The 3-year period from 2012 to 2015 shows the dollar amount increases in recovery from those of the previous years, with most percentiles having amounts approaching pre-recession change levels (2006 to 2009), with the exception of 95<sup>th</sup> percentile, which experienced a dollar amount change exceeding those years amounts.

On the following page, Chart 4 displays percent changes in health job earnings from 2006 to 2015. This chart reveals that the years 2006 to 2009 had the most robust percent earnings change in almost all

percentiles, with the exception of the 95<sup>th</sup> percentile. In 2012 to 2015 the 95th percentile percent increase exceeded that of all other percentiles in all years.

Chart 4 (below) also reveals that the percent amount for all percentiles in the 3-year interval of 2009 to 2012 moved in a cycling ‘rise and fall’ pattern, completing the highest rise in the highest two percentile levels, the 99<sup>th</sup> percentile having the largest (9.4%) and the 95<sup>th</sup> percentile having the next largest percent change (6.3%) in health job earnings percent change. The percentile levels job earnings percent change recovered somewhat in the final 2012 to 2015 3-year interval. The largest percent change for that interval occurred in the 95<sup>th</sup> percentile, which exceeded its percent amount in the previous first interval (2006-2009) by 2.1 percentage points, a total change of 15.9% in the final 3-year interval.

**Chart 4. Health Job Quarterly Earnings Percentile Percent Change, 3-Year Intervals: 2006 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.  
 Note<sup>2</sup>: Cases where earnings are less than \$300 removed  
 Note<sup>3</sup>: The unit of analysis is a job.

Another way of comparing quarterly job earnings and earnings changes is by placing quarterly earnings dollar amounts and percent changes for the four individual years of the 3-year intervals side-by-side in a table. Table 8 and Chart 5 (both on the next page) shows quarterly earnings dollar amounts for these years, alongside the percent change in earnings between these years.

Table 8 gives the exact health job earning total amounts and Chart 5 gives a visual illustration of health job earnings total amounts for each of the four individual years occurring in the three 3-year intervals from 2006 to 2015. The table and chart together show that these percentile earnings dollar amounts for each of these four years increase as the percentile level increases. They also show that the earnings dollar total amounts increased for each percentile as time advances.

**Table 8. Health: Job Quarterly Earnings Dollar Amounts by Percentile for Years: 2006, 2009, 2012 & 2015**

Percentile	2006	2009	2012	2015	2006-09 % Change	2009-12 % Change	2012-15 % Change
5th	655	735	746	792	12.2	1.5	6.2
10th	1,093	1,246	1,292	1,411	14.0	3.7	9.2
20th	2,159	2,499	2,608	2,937	15.7	4.4	12.6
25th	2,770	3,177	3,340	3,732	14.7	5.1	11.7
30th	3,320	3,803	4,015	4,455	14.5	5.6	11.0
40th	4,307	4,889	5,128	5,680	13.5	4.9	10.8
50th	5,282	5,984	6,250	6,905	13.3	4.4	10.5
60th	6,428	7,279	7,665	8,427	13.2	5.3	9.9
70th	8,040	9,121	9,681	10,671	13.4	6.1	10.2
75th	9,183	10,420	11,038	12,082	13.5	5.9	9.5
80th	10,613	11,985	12,594	13,813	12.9	5.1	9.7
90th	14,754	16,560	17,308	19,100	12.2	4.5	10.4
95th	19,494	22,177	23,585	27,342	13.8	6.3	15.9
99th	60,000	68,566	75,000	83,545	14.3	9.4	11.4
<b>Total Jobs</b>	<b>169,676</b>	<b>179,062</b>	<b>187,664</b>	<b>182,923</b>	<b>5.5</b>	<b>4.8</b>	<b>-2.5</b>

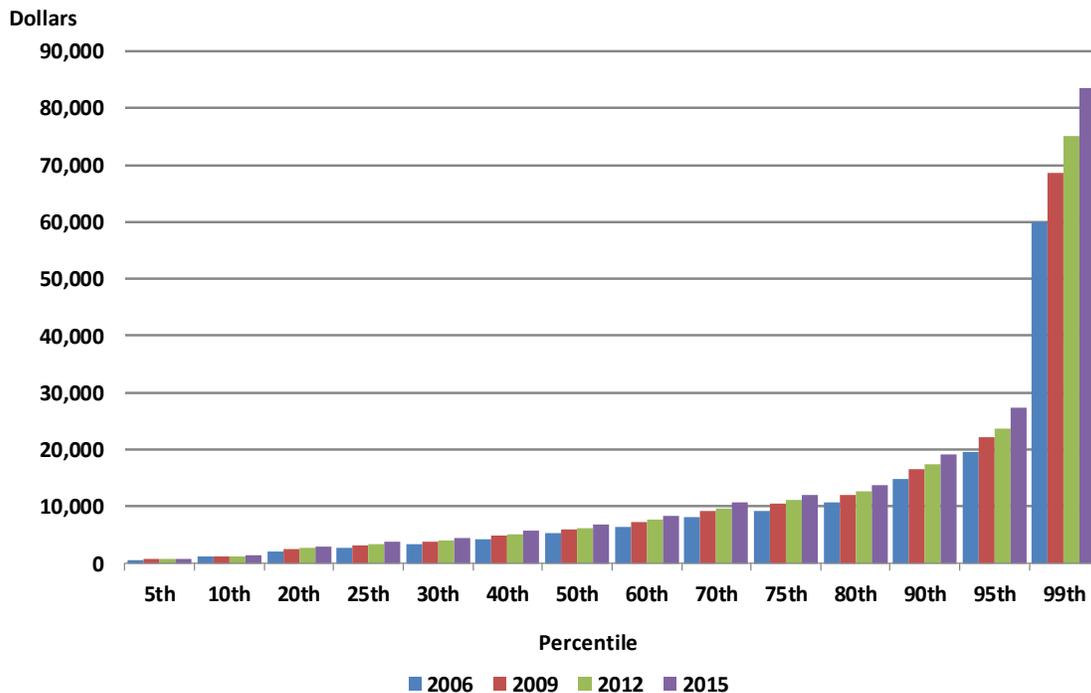
Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Chart 5 summarizes Table 8 data for health dollar amounts, while also providing an enlightening illustration of the quarterly earnings dollar amounts and their changes in each 3-year period.

**Chart 5. Health Job Quarterly Earnings Dollar Amounts by Percentile:  
2006, 2009, 2012 & 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

#### IV. Health Percentile Quarterly Job Earnings, 10-Year Changes: 2005 to 2015

A fourth way in that all health percentile earnings and earnings changes can be examined is by quarterly job earnings dollar amounts and percent changes for the 10-year interval from 2005 to 2015.

**Table 9. Health: Job Quarterly Earnings in 10-Year Interval by Percentile: 2005 to 2015**

Percentile	2005	2015	Number Change	Percent Change
5th	\$641	\$792	\$151	23.6
10th	\$1,056	\$1,411	\$355	33.6
20th	\$2,114	\$2,937	\$823	38.9
25th	\$2,713	\$3,732	\$1,019	37.6
30th	\$3,249	\$4,455	\$1,206	37.1
40th	\$4,156	\$5,680	\$1,524	36.7
50th	\$5,036	\$6,905	\$1,869	37.1
60th	\$6,083	\$8,427	\$2,344	38.5
70th	\$7,578	\$10,671	\$3,093	40.8
75th	\$8,632	\$12,082	\$3,450	40.0
80th	\$9,934	\$13,813	\$3,879	39.0
90th	\$13,748	\$19,100	\$5,351	38.9
95th	\$18,271	\$27,342	\$9,070	49.6
99th	\$59,550	\$83,545	\$23,995	40.3
<b>Total Jobs</b>	<b>162,977</b>	<b>182,923</b>	<b>19,946</b>	<b>12.2</b>

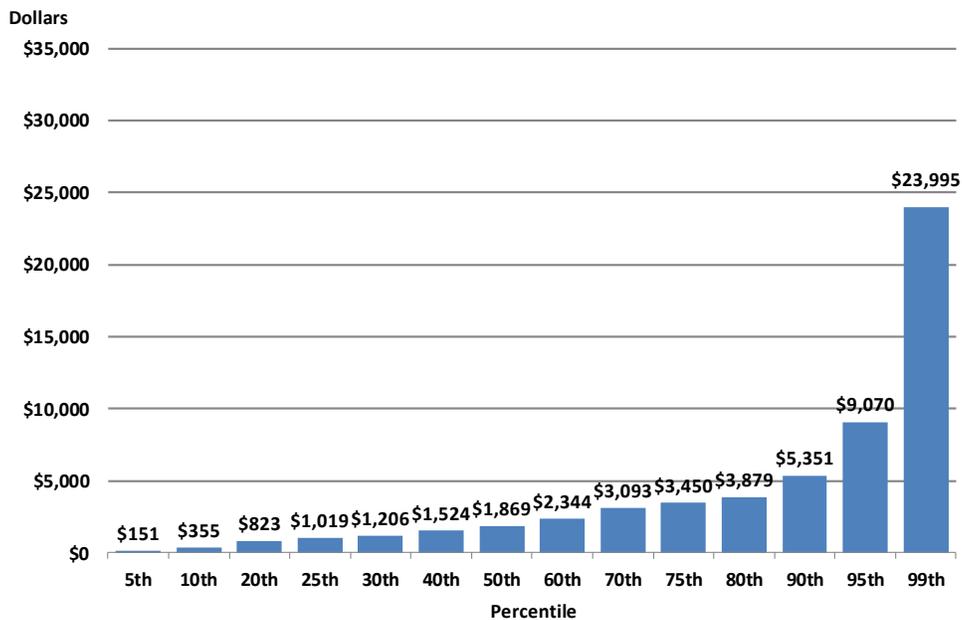
Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Table 9 shown (above) shows both the 10-year quarterly earnings dollar amounts and percent changes for health. Chart 6 (below) illustrates the dollar amount change for this interval.

**Chart 6. Health Job Quarterly Earnings Percentile Dollar Change: 2005 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

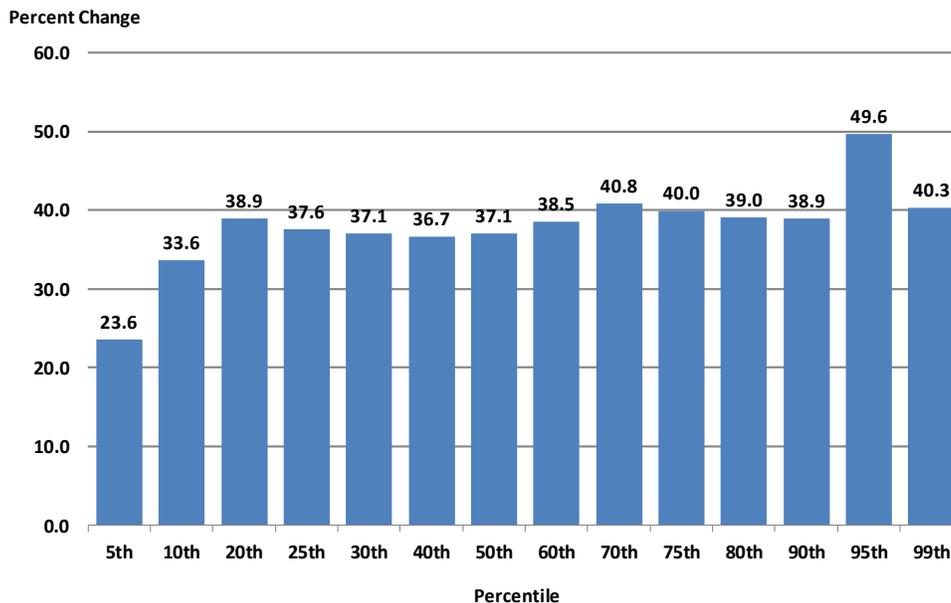
Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

Shown on the previous page, Table 9 displays that between 2005 and 2015, the dollar amounts for health job earnings increased for all percentile levels, with dollar amount increasingly larger as the percentile level increases. Also on the previous page, Chart 6 displays a graphic illustration of this percentile level and dollar amount of health job earnings relationship.

Table 9 and in Chart 7 below, displaying the change for this ten-year period did not show a steady increase from lower levels to higher levels. The percentile percent change ascend and decline four times as the levels increased, ending with 40.3% change for the ten years for health job earnings at the 99<sup>th</sup> percentile level. The 5<sup>th</sup>, 20<sup>th</sup> percentiles had the two smallest changes and the 95<sup>th</sup> percentile had the largest health job earnings, while the eleven remaining percentile levels varied by only a maximum amount of 4.1 percentage points during the ten years.

**Chart 7. Health Job Quarterly Earnings Percentile Percent Change: 2005 to 2015**



## V. Summary and Conclusions

In summary, the 1-year interval analyses of health job earnings percentile dollar amounts and percent earnings amount changes for intervals 2011 to 2015 reveal an uneven percentile change from interval to interval. In the interval 2011 to 2012, the earnings dollar amount change was small for most percentiles, with eight of the fourteen percentiles showing dollar amount decreases. Both interval 2012 to 2013 and 2013 to 2014 had significant earnings dollar amount increases, with the amounts larger as the percentile level increased. Interval 2014 to 2015 again experienced small earnings dollar amount increases, with the 5<sup>th</sup> and 20<sup>th</sup> percentiles decreasing. Both dollar earnings amounts change and percent earnings change for 1-interval intervals were the best in interval 2012 to 2013, for all health job earnings percentiles.

The 3-year interval analyses of health's dollar amount and percent amount earnings changes from 2006 to 2015 determined the following. The 3-year interval 2006 to 2009 had the largest dollar amount earnings changes for each percentile, with the exception of the 95<sup>th</sup> percentile. The 95<sup>th</sup> percentile dollar amount earnings changes in 2012 to 2015 were larger than those in any other percentile in any of the 3-year intervals. Years 2009 to 2012 had the least amount dollar amount earnings change of all three 2006 to

2015 3-year intervals. The dollar amount earnings change for these three intervals increased the higher the percentile levels. However, no firm pattern of percentile job earnings percent amount changes could be determined for most of the percentiles in any of the 3-year intervals. The 'no pattern' exceptions being the 99<sup>th</sup> and the 5<sup>th</sup> percentiles; the 99<sup>th</sup> percentile having the largest percent changes in each 3-year interval, while in the 3-year intervals the 5<sup>th</sup> percentile was either the lowest or in one interval tied for lowest percent change.

An examination of the total dollar amounts of the key four years 2006, 2009, 2012 and 2015 in each of the three 3-year intervals determined that all percentiles increased steadily from 2006 to 2015; with the percentile amounts becoming larger as the percentile level increased, as shown in Table 9 and Chart 5.

The analysis of the 10-year interval of year 2005 to 2015 of health job earnings percentile dollar amount change and percent change determined two key findings. The first finding determined that the dollar amount change was larger with increasingly higher percentile levels. The second finding established that the 5<sup>th</sup> percentile had the lowest; the 10<sup>th</sup> percentile had the second lowest job earnings percent change, the 95<sup>th</sup> percentile showed the largest amount change and the remaining percentiles varied by only 4.1 percentage points in job earnings percent change during the 10-year interval.

The central findings of this investigation of health job earnings percentile changes may be abridged as the following. The health industry experienced some percentile dollar and percent amount decreases in the 1-year intervals of 2011 to 2012 and 2014 to 2015, and had smaller percentile increase in the recession 3-year interval of 2009 to 2012. In spite of these 1-year interval percentile earnings decreases and the smaller increases in this one 3-year interval, in the 10-year interval 2005 to 2015 the major and overall change in percentile job earnings has been one of significant positive increases, especially so for the 10<sup>th</sup> percentile and higher. Therefore in conclusion, a trend analysis Oklahoma's largest health industry's job earnings percentile change is a needed and helpful addition to the list of Oklahoma economic indicators, especially in view of the state's demographically aging population and our growing need for employees in the health care professions.