KANSAS
OCCUPANT PROTECTION
OBSERVATIONAL SURVEY
Supplementary Analyses

CHILD STUDY

July 11, 2016

SUBMITTED TO:
KANSAS DEPARTMENT OF TRANSPORTATION
BUREAU OF TRANSPORTATION SAFETY AND
TECHNOLOGY
EISENHOWER BUILDING
700 SW HARRISON STREET, SIXTH FLOOR
TOPEKA, KS 66603-3754
785-296-3618

Submitted by:
Daniel H. Schulte
DCCCA, Inc.
1739 East 23rd Street
Lawrence, KS 66046
(785) 830-8238
dschulte@dccca.org
Table of Contents:

SUMMARY OF RESULTS .................................................................................................................... 3
  Summary Statement ....................................................................................................................... 3
  Weighted, 2015-2016 Results ..................................................................................................... 5
  Unweighted, 2016 Results .......................................................................................................... 6

METHOD ........................................................................................................................................... 8

RESULTS ......................................................................................................................................... 10
  Description of Results: .............................................................................................................. 10
  Multi-Year, Weighted Data ....................................................................................................... 11
    What are the trends in child safety seat use in Kansas? ......................................................... 11
    What has been the trend in belt use among the separate age groups? .............................. 12
    Are there differences in belt use rates by county? ............................................................... 13
  2016, Unweighted Data ........................................................................................................... 15
    What vehicle types are represented in the 2016 survey? .................................................... 15
    What is the belt use rate among drivers of vehicles carrying children? ............................ 16
    Who is most likely to drive children observed in this study? .............................................. 17
    What types of restraint are observed in the child survey? ................................................... 18
    What were the age groups observed in the child survey, and in what proportions were
    they represented? .................................................................................................................... 19
    Are the children usually riding in the front or back seat? ..................................................... 20
    What percent of the observed, 0-17 year old children were the driver of the observed
    vehicle? ..................................................................................................................................... 22
    What percent of the observed, 15-17 year old children were the driver of the observed
    vehicle? ..................................................................................................................................... 23
    What percent of young drivers were distracted while driving? ............................................. 23
    Are there differences in child restraint use rates among the observed vehicle types?
    ................................................................................................................................................. 24
    Are children buckled up at a different rate, depending on driver gender? ....................... 25
    Are children buckled up at a higher rate if the driver is belted? ......................................... 26
    Are children more likely to be belted in the front seat or the back seat? ............................ 28
    Are children more or less likely to be belted in a truck, depending on the driver’s
    gender? ..................................................................................................................................... 29

CONCLUSIONS............................................................................................................................... 30
SUMMARY OF RESULTS

Summary Statement:

In 2008, a change in Kansas law prompted the inclusion of the 15-17 age group to the annual Kansas Child Occupant Protection Observational Survey, which now collects data on the entire 0-17 year old spectrum. Using 2008 as a benchmark, we see that belt use rates among Kansas children have continued to increase over time.

The state-wide estimate of belt use among Kansas children (0-17) as observed in 2015-2016 is about 88%.

The 0-4 age group is buckled up at the highest rate, at about 97%.

The 5-9 age group, produced a belt use rate of about 84%.

Among 10-14 year olds, about 84% were observed to be buckled up.

And the 15-17 year olds were buckled up in about 86% of the observed cases.

The gaps between the 5-9, 10-14 and the 15-17 age groups continue to narrow. Historically, belt use has declined with age. However, in the 2011-2012 survey, the 15-17 year old age group “crossed the line” and produced a belt use rate that was higher than the 10-14 year olds. That trend has continued, and in the current survey results, the 15-17 year olds produced a belt use rate second only to the 0-4 age group.

As we look at the increases in belt use within each age group, we find that, since 2008-2009:

The 0-4 age group increased their belt use by about 2 percentage points.
The 5-9 age group has increased their belt use by about 11 percentage points.
The 10-14 age group has increased their belt use by about 17 percentage points.
The 15-17 year olds have increased their belt use by almost 24.5 percentage points.

Excluding the 15-17 year old age group from the study, (added in 2008-2009), allowing us to look at a longer time period for comparison, the 2015-2016 state-wide estimate for 0-14 year olds is 88%, as compared to the first child survey, conducted in 2002-2003, when the belt use rate among 0-14 year olds was 55%.

In general, children in urban counties are buckled up at a higher rate than in rural counties. The average among urban counties is about 88%, while the average among rural counties is about 82%.
Children are much more likely to be buckled up if the driver is also belted. If the driver is belted, about 96% of the children are also belted. If the driver is not belted, only about 27% of the observed children were also belted. This may be the most important finding in the study! The disparity is huge.

Distracted driving (cell phone use, texting and other distractions) was added to the study in 2010. The 2016 results indicate a slight decline in observed distractions from the previous year. About 8.4% of 15-17 year old drivers were observed to be distracted in some way, while about 92% were observed as having no distraction. (Previously, 6% and 94% respectively).

The number of children observed in the 2016-2016 survey was 34,774.
Weighted, 2015-2016 Results:

In general, there has been an upward trend in restraint use. Use rates from the Child Occupant Protection Observational Survey began at about 55% in 2002-2003, and have increased to about 88% in 2015-2016 for the 0-14 age groups. Since adding in the 15-17 age group in 2008-2009, the 0-17 estimate increased about 13 percentage points from 75% to 88%.

Historically, the younger the child, the more likely they are to be belted, though, with the exception of the 0-4 age group, which has always produced the highest rate of restraint, this pattern is changing.

Though the 0-4 age group plateaued in 2009-2010 at about 97%, the 0-4 age group has always been belted at a much higher rate than the 5-9 (84%), and the 10-14 age group (84%).

The 15-17 age group continues to increase their belt use in the 2015-2016 survey years to about 86%. The 15-17 year old age group is breaking down “the younger, the more belted” trend. In fact, beginning in 2010-2011, the 15-17 age group “crossed the line” and were belted at a higher rate than the younger, 10-14 age group, and now is the second-highest belt use group.

The restraint use rates among the 5-9, 10-14 and the 15-17 age groups continue to converge.

As we examine the increases in belt use within each age group, we find that, since 2008-2009, the 0-4 age group increased their belt use by about 2 percentage points. The 5-9 age group has increased their belt use by about 11 percentage points. The 10-14 age group increased their belt use by about 17 percentage points, and the 15-17 age group increased their belt use by over 24 percentage points.

In general, children in urban counties are buckled up at a higher rate than in rural counties. The average among urban counties is about 88%, while the average among rural counties is about 82%. Among urban counties, Johnson County children were buckled at the highest rate (98%), while children in Shawnee County were buckled at the lowest rate (73%). Among rural counties, Seward County children were buckled at the highest rate (93%), while children in Neosho County were buckled at the lowest rate (66%).
Unweighted, 2016 Results:

Children are most often observed in autos (46%), followed by SUV’s (28%) then trucks (14%), and, finally, vans (13%). Vans are continuing to decline in numbers on the road, replaced by trucks and SUVs.

About 83% of drivers in vehicles carrying children were belted, while about 17% of the drivers were not belted.

Women (62%) are much more likely to be driving the vehicle carrying children. Men were driving about 38% of observed vehicles.

About 1% of the observed children were in infant seats. About 1% were in rear-facing seats. About 10% were observed in front-facing seats, while about 6% were in booster seats. About 66% were observed in safety belts. About 16% were not restrained at all.

About 84% were using some type of restraint (all seat types combined).

About 15% of the children observed were in the 0-4 age group. The 5-9 age group contributed about 25% of the observed children. The 10-14 age group contributed about 27% of the observed children, while the 15-17 age group was the largest group observed and comprised about 33% of the observed children.

About 63% of the observed children were riding in the front seat, while about 37% of the observed children were riding in the back of the vehicle.

The percentage of children observed in the back seat decreases with age. About 97% of the 0-4 age group are observed in the back seat, followed by the 5-9 age group (58%), followed by the 10-14 age group (21%), followed by the 15-17 age group (6%).

About 17% of the observed 0-17 year old children were driving the observed vehicle, while most children observed (83%) were not the driver.

About 50% of the observed 15-17 year old children were driving the observed vehicle, while 50% were not the driver.

About 2.5% of young drivers were observed to be using a cell phone, while about 2.3% were observed texting. About 3.6% were observed as “Other Distractions” (i.e., eating, operating the radio/audio device, looking for something on or under the seat, etc.). About 92% of young drivers were observed to have “No Distractions”.

Children are buckled up at the highest rate in vans (90%), followed by SUVs (87%), then autos (82%), and finally, trucks (78%).

Children are buckled up at a higher rate when riding with female drivers (86%) as opposed to male drivers (82%).
Children are much more likely to be buckled up if the driver is also belted. If the driver is belted, about 96% of the children are also belted. If the driver is not belted, only about 27% of the observed children were also belted. This may be the most important finding in the study! The disparity is huge.

About 81% of children observed in the front seat were buckled up, while about 89% of those observed in the back seat were buckled. Front seat belt use rate is lower than in the back seat for children.

Children in trucks are more likely to be belted if the driver is female (81%), than if the driver is male (78%).
METHOD

The following Supplementary Analyses are conducted in addition to the primary analysis which contains the results of the 2015-2016 Child Occupant Protection Observational Survey.

The Child Occupant Protection Observational Survey is conducted annually, and includes the same 20, randomly selected counties that were originally observed in the annual adult survey, up through 2011. In the past, three age groups were observed, 0-4, 5-9, and 10-14. Beginning in 2008, an additional age group (15-17) was added, due to a change in Kansas statute, making drivers in this age group subject to a primary safety belt law – that is, a driver under 18 may be stopped and ticketed for not wearing a safety belt. No other infraction is required to issue a safety belt ticket. To measure belt use among this age group, 48 new, randomly selected sites were added in 2008, totaling 398 observation sites. The site pool is comprised of neighborhoods where children of these age groups are likely to be. Those include vicinities of grocery and general-purpose stores, daycare/preschool areas, elementary school neighborhoods, middle-school/junior high neighborhoods, and high school neighborhoods.

(Note: The number of actual observation sites varies from year to year, mostly because of school consolidation and the highly fluid nature of licensed daycares. The total number of actual sites for the 2016 study was 392 sites.)

For purposes of data stability, the data from the two most recent years are combined to produce the annual state-wide estimate. These results include data from 2015 and 2016 combined into one dataset.

Note: Because two years of data are combined to produce the state-wide estimate, the 15-17 age group was included in the 2008-2009 estimate for the first time. This age group is included in the 2015-2016 results for the eighth time. Trend data is displayed showing both the 0-14 and 0-17 age groups.

The data are corrected for over and under reporting by age group using census figures which weight the age groups by the proportions they actually represent in the general population of the observed counties, by the proportions they represent in the urban/rural counties (including only counties that contain 85% of the state population), and finally by the proportions these age groups represented in the counties that contain 85% of the state population. These analysis decisions mimic the method used in the NHTSA-approved “Uniform Criteria”, used in the adult study through 2011. (New, federal requirements were implemented in the adult study beginning in 2012.)
The following table displays the number of children observed for each of the two most recent survey years, and the combined totals.

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>2016</th>
<th>2015</th>
<th>2016+2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>2,634</td>
<td>2,381</td>
<td>5,015</td>
</tr>
<tr>
<td>5-9</td>
<td>4,338</td>
<td>4,293</td>
<td>8,631</td>
</tr>
<tr>
<td>10-14</td>
<td>4,749</td>
<td>4,614</td>
<td>9,363</td>
</tr>
<tr>
<td>15-17</td>
<td>5,877</td>
<td>5,858</td>
<td>11,735</td>
</tr>
<tr>
<td>Totals</td>
<td>17,598</td>
<td>17,146</td>
<td>34,744</td>
</tr>
</tbody>
</table>

Nearly 35,000 children were observed and included in the 2015-2016 state-wide estimate.
RESULTS

Description of Results:

The results will be displayed in two parts. The first part displays the general findings of the 2015-2016 survey, and also displays trends using multi-year data.

The second part uses only 2016 data to investigate details within the data (i.e. differences between vehicle types, driver gender, position in vehicle, etc.).

The results are as follows:
Multi-Year, Weighted Data

What are the trends in child safety seat use in Kansas?

The following table displays the results of the Direct Observation Child Safety Seat Surveys from 2002-2003 through 2015-2016. Remember, the two most recent years’ data are combined to produce each year’s state-wide estimate. The results from children ages 0-14 trends are displayed, along with the children ages 0-17.

(Note: The 15-17 age group was added to the survey for the first time in 2008-2009. Prior years included only 0–14 year olds).

<table>
<thead>
<tr>
<th>Survey Years</th>
<th>0-14</th>
<th>0-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2003</td>
<td>55.41</td>
<td>75.36</td>
</tr>
<tr>
<td>2003-2004</td>
<td>60.57</td>
<td>77.27</td>
</tr>
<tr>
<td>2004-2005</td>
<td>58.76</td>
<td>79.71</td>
</tr>
<tr>
<td>2005-2006</td>
<td>61.25</td>
<td>83.22</td>
</tr>
<tr>
<td>2006-2007</td>
<td>68.13</td>
<td>84.69</td>
</tr>
<tr>
<td>2007-2008</td>
<td>75.05</td>
<td>86.19</td>
</tr>
<tr>
<td>2008-2009</td>
<td>78.28</td>
<td>86.89</td>
</tr>
<tr>
<td>2009-2010</td>
<td>79.79</td>
<td>87.91</td>
</tr>
<tr>
<td>2010-2011</td>
<td>81.54</td>
<td></td>
</tr>
<tr>
<td>2011-2012</td>
<td>84.27</td>
<td></td>
</tr>
<tr>
<td>2012-2013</td>
<td>85.52</td>
<td></td>
</tr>
<tr>
<td>2013-2014</td>
<td>86.91</td>
<td></td>
</tr>
<tr>
<td>2014-2015</td>
<td>87.37</td>
<td></td>
</tr>
<tr>
<td>2015-2016</td>
<td>88.38</td>
<td></td>
</tr>
</tbody>
</table>

In general, there has been an upward trend in restraint use. Use rates from the Child Occupant Protection Observational Survey began at about 55% in 2002-2003, and have increased to about 88% in 2015-2016 for the 0-14 age groups. Since adding in the 15-17 age group in 2008-2009, the 0-17 estimate increased about 13 percentage points from 75% to 88%.
What has been the trend in belt use among the separate age groups?

The following graph displays the trend in belt use, by age group.

Historically, the younger the child, the more likely they are to be belted, though, with the exception of the 0-4 age group, which has always produced the highest rate of restraint, this pattern is changing.

Though the 0-4 age group plateaued in 2009-2010 at about 97%, the 0-4 age group has always been belted at a much higher rate than the 5-9 (84%), and the 10-14 age group (84%).

The 15-17 age group continues to increase their belt use in the 2015-2016 survey years to about 86%. The 15-17 year old age group is breaking down “the younger, the more belted” trend. In fact, beginning in 2010-2011, the 15-17 age group “crossed the line” and were belted at a higher rate than the younger, 10-14 age group, and now is the second-highest belt use group.

The restraint use rates among the 5-9, 10-14 and the 15-17 age groups continue to converge.
Are there differences in belt use rates by county?

The following table displays the belt use rates, by urban/rural county groups, for the 2015-2016 observation cycle. The urban counties are grouped at the top of the graph (Johnson to Shawnee), while the rural counties are located in the bottom part of the graph (Seward to Neosho).

In general, children in urban counties are buckled up at a higher rate than in rural counties. The average among urban counties is about 88%, while the average among rural counties is about 82%. Among urban counties, Johnson County children were buckled at the highest rate (98%), while children in Shawnee County were buckled at the lowest rate (73%). Among rural counties, Seward County children were buckled at the highest rate (93%), while children in Neosho County were buckled at the lowest rate (66%).
The following table displays the results from each county, for the past five years, ranked ascending, (based on 2015-2016 results) within rural and urban groups. These years contain all of the age groups, 0-17.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age Prop</td>
<td>Weighted</td>
<td>Age Prop</td>
<td>Weighted</td>
<td>Age Prop</td>
</tr>
<tr>
<td>R</td>
<td>Neosho</td>
<td>63.35</td>
<td>58.06</td>
<td>67.11</td>
<td>68.32</td>
</tr>
<tr>
<td>R</td>
<td>Pottawatomie</td>
<td>82.54</td>
<td>76.16</td>
<td>72.53</td>
<td>72.66</td>
</tr>
<tr>
<td>R</td>
<td>Harvey</td>
<td>68.04</td>
<td>69.00</td>
<td>68.33</td>
<td>67.17</td>
</tr>
<tr>
<td>R</td>
<td>Lyon</td>
<td>81.04</td>
<td>71.83</td>
<td>70.42</td>
<td>72.19</td>
</tr>
<tr>
<td>R</td>
<td>Finney</td>
<td>85.26</td>
<td>78.15</td>
<td>74.06</td>
<td>69.72</td>
</tr>
<tr>
<td>R</td>
<td>Sumner</td>
<td>80.84</td>
<td>80.69</td>
<td>81.75</td>
<td>83.58</td>
</tr>
<tr>
<td>R</td>
<td>Crawford</td>
<td>82.92</td>
<td>84.90</td>
<td>89.10</td>
<td>86.94</td>
</tr>
<tr>
<td>R</td>
<td>Montgomery</td>
<td>73.68</td>
<td>81.19</td>
<td>83.94</td>
<td>90.68</td>
</tr>
<tr>
<td>R</td>
<td>Cowley</td>
<td>83.86</td>
<td>82.94</td>
<td>85.45</td>
<td>88.73</td>
</tr>
<tr>
<td>R</td>
<td>Ellis</td>
<td>82.00</td>
<td>86.85</td>
<td>89.94</td>
<td>91.57</td>
</tr>
<tr>
<td>R</td>
<td>Atchison</td>
<td>71.66</td>
<td>81.73</td>
<td>91.43</td>
<td>96.49</td>
</tr>
<tr>
<td>R</td>
<td>Seward</td>
<td>81.56</td>
<td>87.18</td>
<td>90.06</td>
<td>90.94</td>
</tr>
<tr>
<td>U</td>
<td>Shawnee</td>
<td>77.50</td>
<td>71.25</td>
<td>72.23</td>
<td>72.48</td>
</tr>
<tr>
<td>U</td>
<td>Wyandotte</td>
<td>76.04</td>
<td>84.24</td>
<td>83.18</td>
<td>75.80</td>
</tr>
<tr>
<td>U</td>
<td>Reno</td>
<td>83.85</td>
<td>83.85</td>
<td>85.07</td>
<td>85.37</td>
</tr>
<tr>
<td>U</td>
<td>Leavenworth</td>
<td>80.04</td>
<td>88.50</td>
<td>88.71</td>
<td>85.31</td>
</tr>
<tr>
<td>U</td>
<td>Sedgwick</td>
<td>86.50</td>
<td>87.56</td>
<td>89.78</td>
<td>92.97</td>
</tr>
<tr>
<td>U</td>
<td>Saline</td>
<td>87.01</td>
<td>88.63</td>
<td>90.68</td>
<td>91.95</td>
</tr>
<tr>
<td>U</td>
<td>Douglas</td>
<td>89.61</td>
<td>95.80</td>
<td>96.70</td>
<td>97.78</td>
</tr>
<tr>
<td>U</td>
<td>Johnson</td>
<td>88.91</td>
<td>91.97</td>
<td>94.38</td>
<td>95.97</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>80.31</td>
<td>81.52</td>
<td>83.24</td>
<td>83.83</td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>6.86</td>
<td>8.83</td>
<td>9.19</td>
<td>10.31</td>
</tr>
</tbody>
</table>

Average Rural: 78.06  78.22  80.34  81.58  81.81
Average Urban: 83.68  86.48  87.59  87.20  88.19
2016, Unweighted Data

Note: The remaining results in this supplementary report use only data collected in 2016. They are also unweighted; that is, they are not statistically adjusted for over or under representation. They include the 0-17 age groups. These data are used to illustrate the relative differences between various groups within the data, i.e., vehicle types, drivers belted, etc.

What vehicle types are represented in the 2016 survey?

The following graph displays the types of vehicles observed in the 2016 child passenger safety seat survey, and their proportions represented. (Note: This is not belt use.)

Children are most often observed in autos (46%), followed by SUV’s (28%) then trucks (14%), and, finally, vans (13%). Vans are continuing to decline in numbers on the road, replaced by trucks and SUVs.
What is the belt use rate among drivers of vehicles carrying children?

The following graph displays the belt use rates of drivers observed carrying children.

![Graph showing belt use rates](image)

About 83% of drivers in vehicles carrying children were belted, while about 17% of the drivers were not belted.
Who is most likely to drive children observed in this study?

The following graph displays the gender proportions of drivers observed in this study. *(This is *not* belt use).*

![Graph showing gender proportions of drivers](image)

Women (62%) are much more likely to be driving the vehicle carrying children. Men were driving about 38% of observed vehicles.
What types of restraint are observed in the child survey?

The following graph displays the percent of children observed using different types of child passenger restraint systems.

![Graph showing percent of children observed in different types of restraint systems]

About 1% of the observed children were in infant seats. About 1% were in rear-facing seats. About 10% were observed in front-facing seats, while about 6% were in booster seats. About 66% were observed in safety belts. About 16% were not restrained at all. About 84% were using some type of restraint (all seat types combined).
What were the age groups observed in the child data, and in what proportions were they represented?

The following graph displays the age groups observed, and their proportional representation in the data. *(This is not belt use).*

![Proportion of Age Groups Observed](chart.png)

About 15% of the children observed were in the 0-4 age group. The 5-9 age group contributed about 25% of the observed children. The 10-14 age group contributed about 27% of the observed children, while the 15-17 age group was the largest group observed and comprised about 33% of the observed children.
Are the children usually riding in the front or back seat?

The following graph displays the location of observed children, either in the front or back of the vehicle. (*This is not belt use*).

About 63% of the observed children were riding in the front seat, while about 37% of the observed children were riding in the back of the vehicle.

*See graph on next page for further explanation.*
The following graph displays the percentage of children located in the back seat, by age group. *(This is not belt use).*

The percentage of children observed in the back seat decreases with age. About 97% of the 0-4 age group are observed in the back seat, followed by the 5-9 age group (58%), followed by the 10-14 age group (21%), followed by the 15-17 age group (6%).
What percent of the observed, 0-17 year old children were the driver of the observed vehicle?

The following graph displays the percent of observed 0-17 year old children who were the driver. *(Not belt use)*

[Child Survey](#)  
2016  
Percent of Observed Children (0-17) Who Were the Driver *(Not Belt Use)*

About 17% of the observed 0-17 year old children were driving the observed vehicle, while most children observed (83%) were not the driver.
What percent of the observed, 15-17 year old children were the driver of the observed vehicle?

The following graph displays the percent of observed 15-17 year old children who were the driver. *(Not belt use)*

About 50% of the observed 15-17 year old children were driving the observed vehicle, while 50% were not the driver.
What percent of young drivers were distracted while driving?

The following graph displays percent of young drivers distracted as observed in the 2015 study. (*Not belt use*)

![Child Survey 2016 Percent of Young Drivers Distracted (Not Belt Use)](image)

About 2.5% of young drivers were observed to be using a cell phone, while about 2.3% were observed texting. About 3.6% were observed as “Other Distractions” (i.e., eating, operating the radio/audio device, looking for something on or under the seat, etc.). About 92% of young drivers were observed to have “No Distractions”.

24
Are there differences in child restraint use rates among the observed vehicle types?

The following graph displays the percent of children restrained in the four observed vehicle types.

![Child Survey 2016 Child Belt Use by Vehicle Type](image)

Children are buckled up at the highest rate in vans (90%), followed by SUVs (87%), then autos (82%), and finally, trucks (78%).
Are children buckled up at a different rate, depending on driver gender?

The following graph displays the child belt use rate for both male and female drivers.

Children are buckled up at a higher rate when riding with female drivers (86%) as opposed to male drivers (82%).
Are children buckled up at a higher rate if the driver is belted?

The following graph displays the belt use rates for children with belted, and unbelted drivers.

Children are much more likely to be buckled up if the driver is also belted. If the driver is belted, about 96% of the children are also belted. If the driver is not belted, only about 27% of the observed children were also belted. This may be the most important finding in the study! The disparity is huge.
Are children more likely to be belted in the front seat or the back seat?

The following graph displays differences in child belt use rates for children observed in the front and back seats.

About 81% of children observed in the front seat were buckled up, while about 89% of those observed in the back seat were buckled. Front seat belt use rate is lower than in the back seat for children.
Are children more or less likely to be belted in a truck, depending on the driver’s gender?

The following graph is for truck data only. It displays the child belt use rates depending on driver gender.

Children in trucks are more likely to be belted if the driver is female (81%), than if the driver is male (78%).
CONCLUSIONS

The state-wide estimate of belt use among Kansas children (0-17) as observed in 2015-2016 is about 88%.

The 0-4 age group is buckled up at the highest rate, at about 97%.

The 5-9 age group, produced a belt use rate of about 84%.

Among 10-14 year olds, about 84% were observed to be buckled up.

And the 15-17 year olds were buckled up in about 86% of the observed cases.

The gaps between the 5-9, 10-14 and the 15-17 age groups continue to narrow. Historically, belt use has declined with age. However, in the 2011-2012 survey, the 15-17 year old age group “crossed the line” and produced a belt use rate that was higher than the 10-14 year olds. That trend has continued, and in the current survey results, the 15-17 year olds produced a belt use rate second only to the 0-4 age group.

As we look at the increases in belt use within each age group, we find that, since 2008-2009:

The 0-4 age group increased their belt use by about 2 percentage points.
The 5-9 age group has increased their belt use by about 11 percentage points.
The 10-14 age group has increased their belt use by about 17 percentage points.
The 15-17 year olds have increased their belt use by almost 24.5 percentage points.

Excluding the 15-17 year old age group from the study, (added in 2008-2009), allowing us to look at a longer time period for comparison, the 2015-2016 state-wide estimate for 0-14 year olds is 88%, as compared to the first child survey, conducted in 2002-2003, when the belt use rate among 0-14 year olds was 55%.

In general, children in urban counties are buckled up at a higher rate than in rural counties. The average among urban counties is about 88%, while the average among rural counties is about 82%.

Children are much more likely to be buckled up if the driver is also belted. If the driver is belted, about 96% of the children are also belted. If the driver is not belted, only about 27% of the observed children were also belted. This may be the most important finding in the study! The disparity is huge.

Distracted driving (cell phone use, texting and other distractions) was added to the study in 2010. The 2016 results indicate a slight decline in observed distractions from the previous year. About 8.4% of 15-17 year old drivers were observed to be distracted in some way, while about 92% were observed as having no distraction. (Previously, 6% and 94% respectively).