



## An Injury Analysis To Determine the Effectiveness Of the IPCS Physical Capability Evaluation (PCE) Program On Reducing Injuries For

*An LTL Carrier - 2009*

*The data clearly shows a significant difference in the average cost per claim when comparing those who took the IPCS PCE compared to those who did not. The Average Claim cost was about 3 times greater for those who did not take the IPCS PCE. When comparing the Total Cost for Medical Claims and Reserves and although the IPCS group accounted for 24% of the injuries, the IPCS claims only accounted for 10% of the cost.*

The following comparative study was performed to evaluate the impact of the IPCS new hire physical capability evaluation (PCE) program on reducing the severity of injuries.

- The injury loss run included all injuries that occurred between November 2, 2006 and May 29, 2009 for drivers, dockworkers and yard jockeys for relevant terminals during the years they were using the IPCS program.
  - New hire date was not available for all workers so it was not possible to limit the analysis based on length of employment.
- Since the inception of the program, 2,087 new hires received the IPCS PCE. Of these, 2,087, 1,924 (92%) were recommended for hire.

# Results

## Frequency of Injury

The first chart shows the Headcount per year from 2006 to 2009 for drivers, dockworkers and yard jockeys. The average headcount per year is 3,480. Chart 1 also shows the number of new hire applicants who received the IPCS PCE and were recommended for hire.

Chart 1

<b>Year</b>	<b>Headcount</b>	<b>Tested-Rec</b>
<b>2006</b>	<b>3,569</b>	<b>516</b>
<b>2007</b>	<b>3,600</b>	<b>223</b>
<b>2008</b>	<b>3,548</b>	<b>314</b>
<b>2009</b>	<b>3,202</b>	<b>79</b>

Chart 2 shows the number of injuries by year for those who were employed but not tested compared with those who were employed and tested. It is difficult to compare the numbers since the number of workers employed who had taken the test versus the number of employed not taking the test is not known.

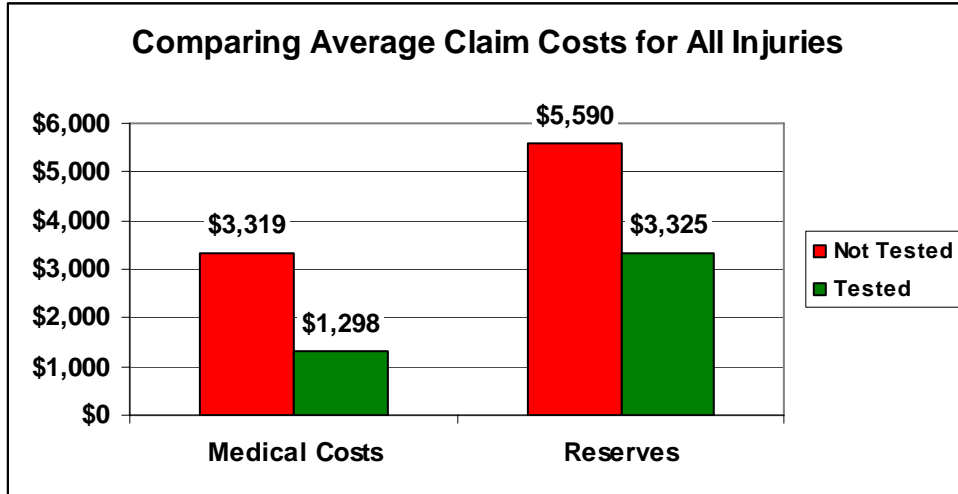
Chart 2

<b>Year</b>	<b>Not Tested</b>	<b>Tested</b>
<b>2006</b>	<b>53</b>	<b>11</b>
<b>2007</b>	<b>246</b>	<b>77</b>
<b>2008</b>	<b>220</b>	<b>69</b>
<b>2009</b>	<b>67</b>	<b>25</b>
<b>Total</b>	<b>586</b>	<b>182</b>

## Average Claim Cost

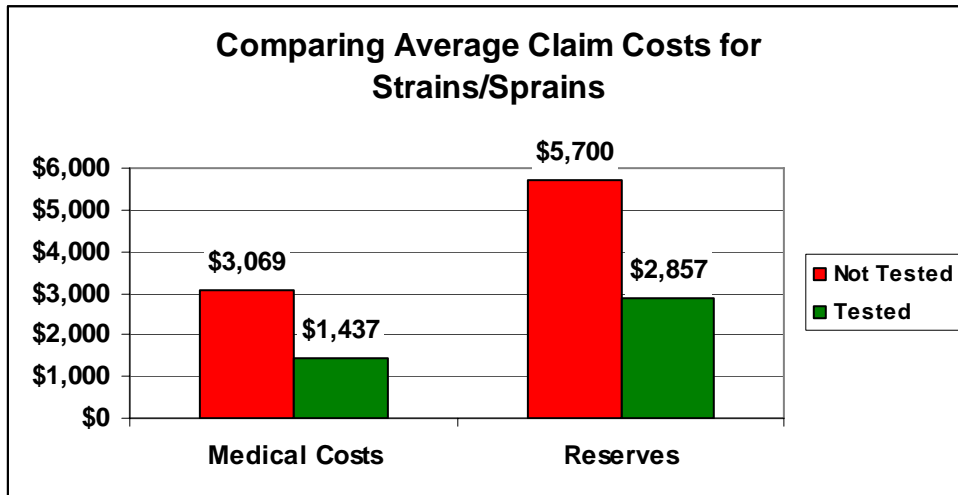
All Injuries: Chart 3 shows the average claim costs for All Injuries for the Medical Costs and Reserves. The Not Tested group average costs were about 3 times greater compared to the Tested group for Medical Costs. The average claim for Reserves was about two times greater for the Not Tested group compared to the Tested group.

Chart 3



Strains/Sprains: Chart 4 shows the average claim cost for Strains/Sprains for Medical Cost and Reserves. The average claim costs were more than 2 times greater for the Not Tested group compared to the Tested group for Medical Costs and Reserves.

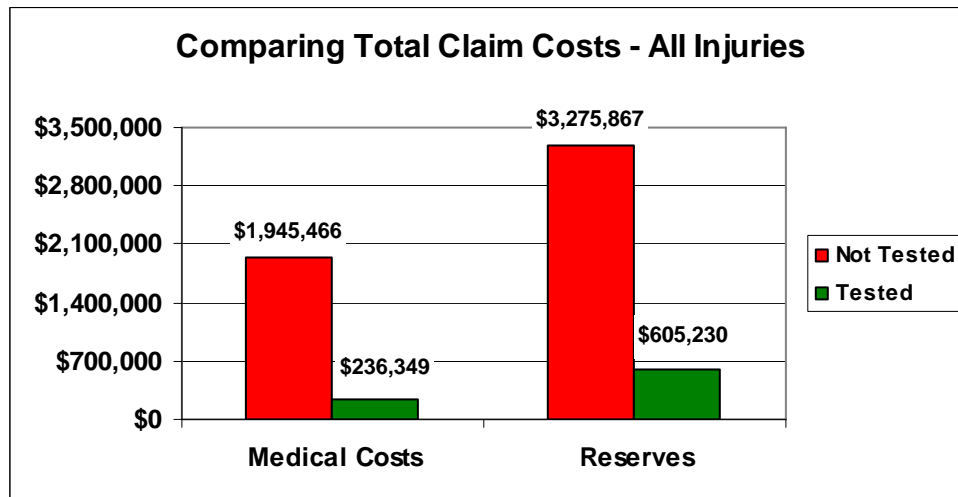
Chart 4



## Total Claim Cost

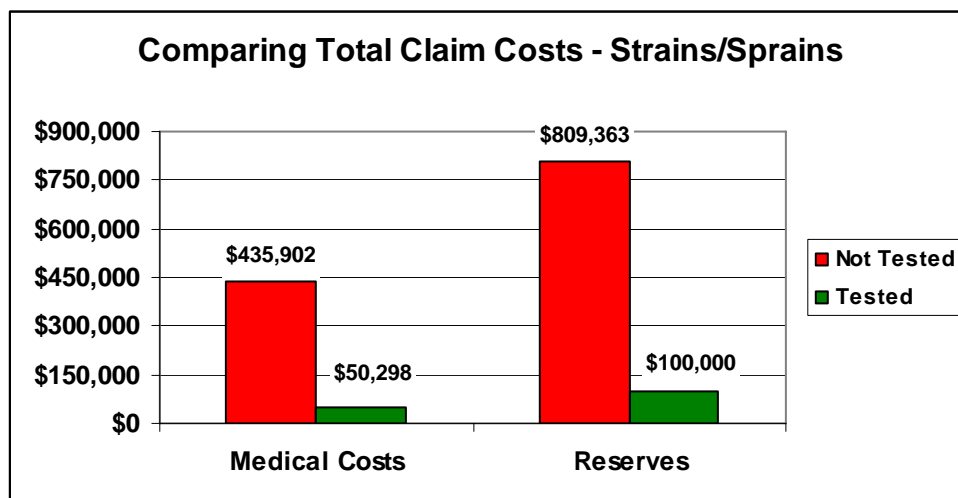
All Injuries: Chart 5 shows the Total Claim costs for All Injuries for Medical Costs and Reserves for the Not Tested and Tested group. The Total Claim Costs for Medical Claims was about 9 times greater for the Not Tested group compared with Tested group and about 6 times greater for the Reserves.

Chart 5



Strains/Sprains: Chart 6 shows the Total Claim costs for Strains/Sprains for Medical Costs and Reserves for the Not Tested and Tested group. The Total Claim Costs for the Not Tested group was about 9 times greater compared with the Tested group for both the Medical Claims and Reserves.

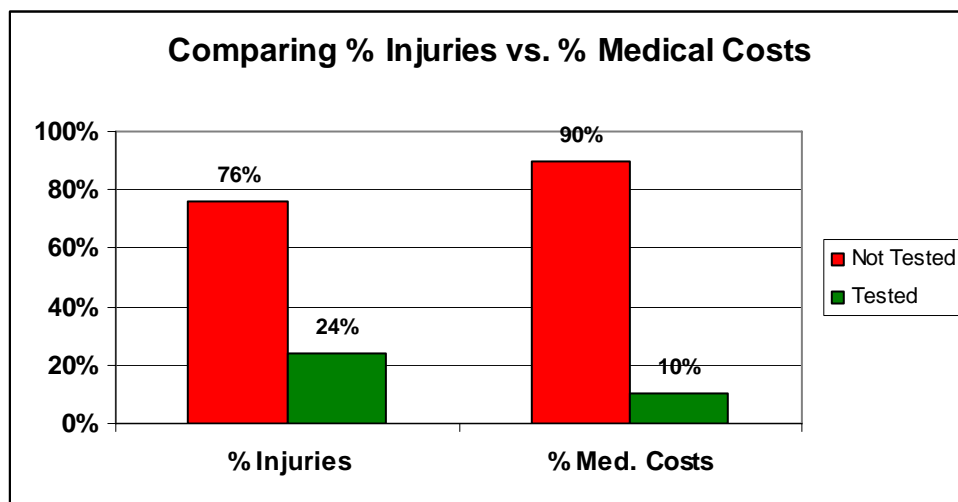
Chart 6



Since the number of employees who received the IPCS compared with those who did not was not equal, presenting total cost as was shown in Chart 5 and 6 does not truly represent the differences between the two groups and doesn't represent an accurate assessment of the differences.

However, Chart 7 represents the data as a percentage which makes the comparison valid. Chart 7 shows 76% percent of all of the injuries were those employees who did **not** take the IPCS PCE. If the IPCS process was not effective, the percentage for Medical Costs and Reserves should be identical to the breakdown of the percent injured. But what can be observed on Chart 7 is that although the Not Tested group accounted for 76% of the injuries, they accounted for 90% of all Medical Costs (it should be noted that the same percent was true for Reserves too). Whereas, the Tested group accounted for only 10% of the cost even though they had 24% of the injuries.

Chart 7

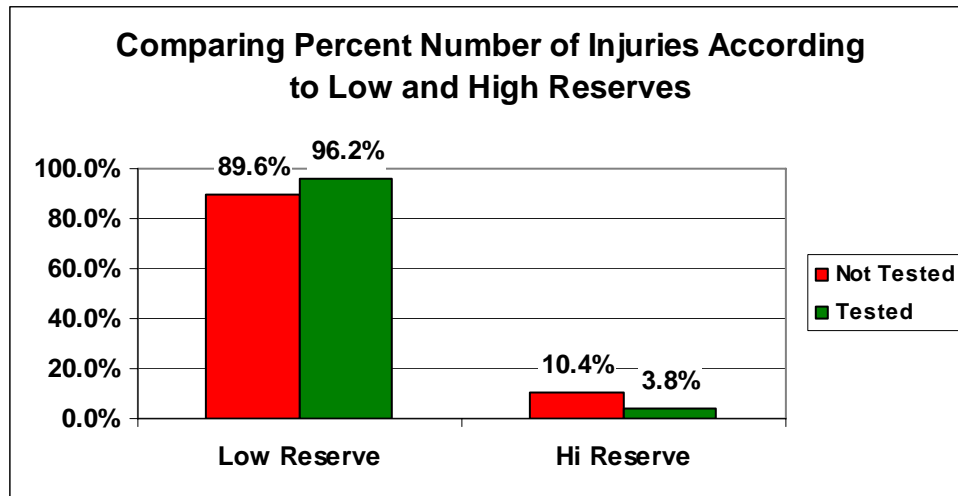


### Severity of Claims

Because averages can sometime be misleading because of one or two high cost claims, the loss run was analyzed to see how many claims with reserves in excess of \$10,000 fell into the Tested group compared with the Not Tested group.

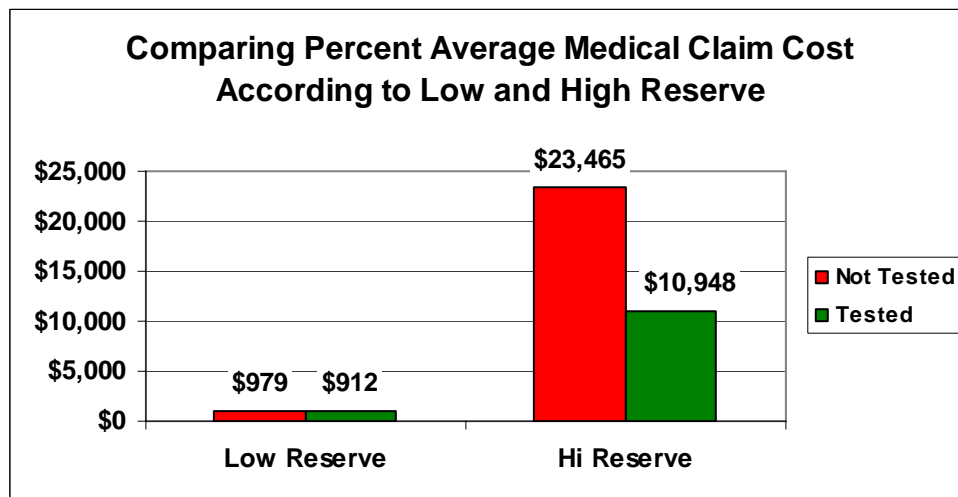
Chart 8 shows the difference between the two groups based on Low Reserve claims (<\$10,000) and High Reserve claims (>\$10,000). Ninety-six percent of the Tested claims were less than \$10,000 compared with 90% for the Not Tested group. The significant difference is shown with the High Reserve claims, which shows that the Not Tested group had nearly 3 times the number of more high reserve claims than the Tested group.

Chart 8



When analyzing the average Medical Claim cost for the Tested versus Not Tested group based on Low Reserve and High Reserve, chart 9 shows that there is very little difference between the average Medical Claim cost between the Tested and Not Tested group for Low Reserve. The major change comes with the High Reserve claims, which shows the average claim cost is nearly 2.5 times greater for the Not Tested group compared with the Tested.

Chart 9



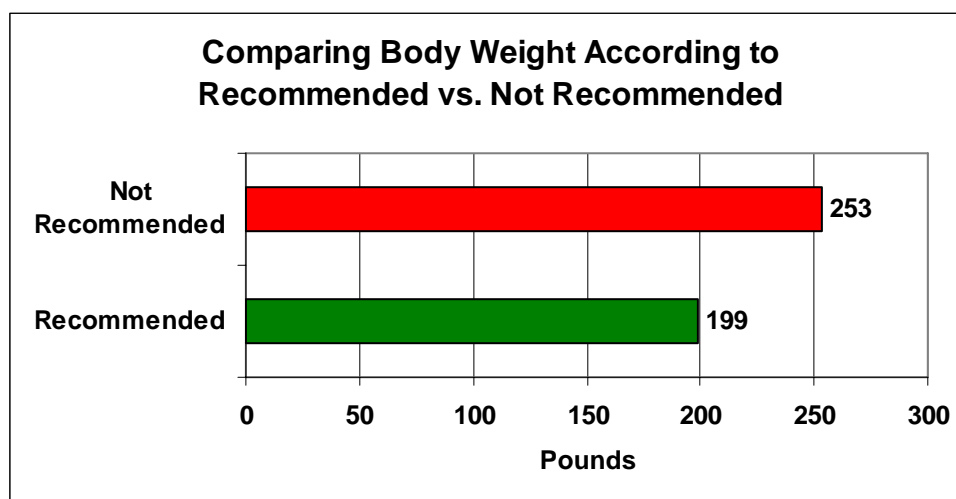
Charts 8 and 9 shows the importance of the IPCS PCE program in that not only are there fewer high cost claims but also these high cost claims cost less when a worker receives the IPCS PCE compared to a worker who does not receive the IPCS PCE.

## Added Health Benefit

The obese employee costs a company not only more money in direct healthcare costs but much more in terms of worker's compensation costs. Indirect costs – loss of productivity, added training and replacement costs are much higher with the obese worker. Because of obesity, the available pool of healthy and fit workers to perform physically demanding jobs is rapidly shrinking. When IPCS performs a new hire evaluation, body weight is a factor when determining whether a new hire applicant is recommended or not recommended for hire.

Chart 10 shows that new hire applicants who were recommended (1,924) for hire with the IPCS program had an average body weight of 199 pounds compared with those not recommended (163) with an average body weight of 253 pounds (a 54 pound difference). The average height for these two groups was with a one-half inch of each other.

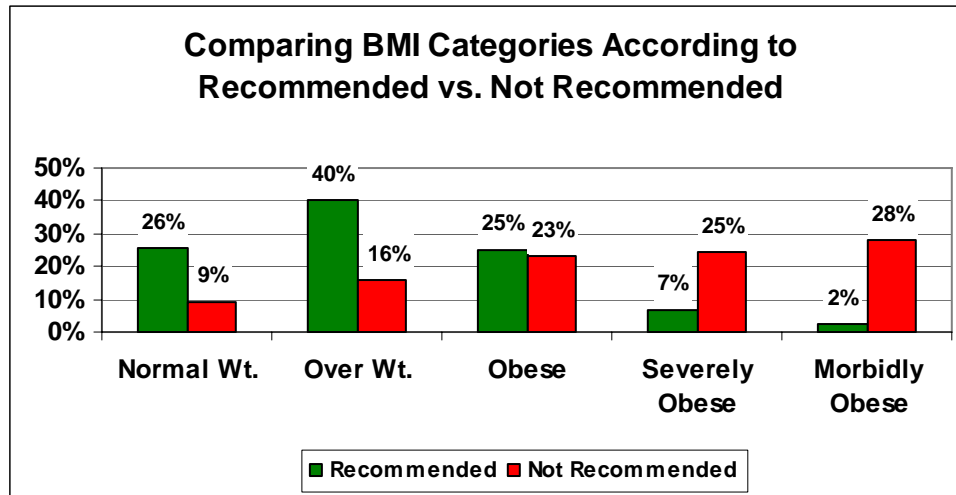
Chart 10



Body mass index (BMI) has been used for many years in research to determine obesity, but recently it has gained in popularity with the consumer because of so much emphasis on obesity. Many web sites have BMI calculators so individuals can determine their BMI scores. Usually scores of less than 25 are considered healthy. A BMI of 25 or greater but less than 30 is considered overweight. A BMI score of 30 or higher is considered obese, between 35 and 39 is considered severe obesity and 40 and greater is morbidly obese. BMI uses both height and weight in its calculation.

Chart 11 shows the breakdown percentages of all of the new hire applicants (2,087) tested by IPCS since the inception of the program according to BMI category. The green bars represent those new hire applicants recommended for hire and the red bars represent those new hire applicants not recommended for hire.

Chart 11



More than 66% of those recommended for hire with the IPCS program fell into the categories of Normal or Over Weight compared with those not recommended which was only 25%. The more significant difference is shown with the Severe and Morbidly obese categories which shows 53% of those not recommended fell into these categories compared with 9% for the recommended group. This is significant because the Severe and Morbidly obese workers have twice as many worker's compensation claims, 13 times more lost work days and 7 times higher claim cost.

Conclusion

The analysis of the loss run for November 2006 through May 2009, clearly shows that the IPCS program reduced the frequency of injury and severity of injury for this LTL Carrier Company. In addition, the program recommended fewer severe and morbidly obese workers, which, based on current research, probably resulted in eliminating additional worker's compensation and medical claims.