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## INJURY REDUCTION IN AIRLINE WORKERS THROUGH A NEW HIRE PHYSICAL CAPABILITY SCREENING PROGRAM

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**PURPOSE:** To determine the effectiveness of a physical capability evaluation program on the reduction of frequency of injury and associated costs for a major US airline. **METHODS:** New hire applicants at Chicago O'Hare Airport hired from 1/00 through 6/00 (Not Tested – NT, n=424) were compared to new hire applicants tested and recommended for hire from 7/00 through 12/00 (Tested – T, n=494). The job classifications included ramp, cabin cleaner, ticket agent and airfreight. The T group received an isokinetic flexion/extension evaluation of the knees and shoulders at 60 degrees/sec. The raw data, including peak torque; right and left and agonist and antagonist ratio scores; and force curve normality rating, were mathematically analyzed to generate a Department of Labor Dictionary of Occupational Title strength rating (sedentary, light, medium, heavy and very heavy). The rating was matched against the job requirement and recommendation for hire was based on a correct match. Injury data were used to determine differences between the T and NT groups. Only those injuries occurring within the first 6-months of employment were considered. **RESULTS:** A Chi-Square analysis showed the observed frequency of injury for the T group (n=21) was significantly less than expected (n=81) in comparison to the frequency of injury for the NT group (n=64) which was about the same as expected (n=69) (Chi-Square = 44.807, df=1, p< .0000). The total injury cost observed for the T group was \$18,018 or 25.6 times less than expected (\$461,214) in comparison to the observed for the NT group (\$364,416), which was nearly equal to the expected (\$392,886). **CONCLUSION:** These results show an isokinetic knee-shoulder new hire physical capability evaluation significantly reduced the frequency and costs of work related injuries for a major US airline.

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