

# DOSH Inspection and Consultation Visits and Compensable Claims Rates in Washington State

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## **Executive Summary**

Since 2002 the Safety & Health Assessment & Research for Prevention (SHARP) program of the Washington State Department of Labor and Industries (L&I) has conducted annual analyses of the association between enforcement and consultation activities of the Washington State Division of Occupational Safety & Health (DOSH) and compensable claims rates. Four of these annual reports showed that DOSH enforcement inspections at 'fixed-site' industry workplaces were associated with a decline in claims rates relative to those businesses that had no DOSH visits (Baggs et al. 2003; SHARP Technical Report 2003; SHARP Technical Report 2006, SHARP Technical Report 2007). But due to the greater volatility of claims rates at 'non-fixed-site' businesses and the small numbers of consultation visits satisfying our study selection criteria, the previous analyses did not find statistically significant changes among 'non-fixed-site' businesses receiving enforcement visits or all business receiving only consultation visit(s) during the same evaluation periods.

In 2011, we pooled ten previous annual studies together covering inspections and consultations from 1999 through 2008. With much larger number of DOSH visits, we were able to estimate the impact of DOSH visits with greater statistical confidence. The results of the pooled analysis provide strong evidence that DOSH inspection and consultation activities make a significant contribution to reducing claims rates and costs in the period following the visit (Foley et al., 2012). They also suggest that while enforcement has a similar impact in both fixed and non-fixed-site industries, consultation has a particularly strong effect in the non-fixed establishments.

In a continued effort to evaluate progress toward the DOSH safety objective 1 of making the "workplace injury and illness rate in Washington State the lowest in the nation", this analysis examined whether a greater decline in compensable claims rates occurred among the set of business receiving DOSH inspection and consultation visits in 2011 than occurred at businesses not receiving any DOSH visits. The impact of DOSH activities on

compensable claims rates during SFY 2011-2012 was evaluated separately for fixed and the non-fixed-site industries for all accounts and by size of employers (smaller 5-24 FTEs, medium 25-49 FTEs, and larger  $\geq 50$  FTEs). Additional analyses were conducted for DOSH programmed or unprogrammed inspections, as well as inspections with citation or without citation.

The methods used in this analysis mirror those used in the previous studies. The following inclusion criteria were used to select the group of accounts for this study:

1. Only companies reporting hours each quarter during State Fiscal Years (SFY) 2009-2012.
2. State Fund companies.
3. Companies with a single business location.
4. Companies with at least 5 FTEs per year during SFY 2009-2012.
5. Companies with no DOSH activity during the two years prior to the year of the DOSH activity (SFY 2009-2010).

Descriptive analyses were conducted first for the changes in compensable claims rate by SFY. Because average account size and the account's prior history of compensable claims rates were important factors in evaluating the impact of DOSH activities, the changes in compensable claims rates were examined in multivariate analyses adjusting for these factors.

**Accounts included:**

- The 16,324 accounts which satisfied the study criteria represented 7.2% of the 228,224 identified accounts reporting hours in at least one quarter during SFY 2009-2012.
  - Fixed-site industries
    - 100 accounts had at least one DOSH consultation visit

- 639 accounts had at least one inspection during SFY 2011.
- Non-fixed-site industries
  - 30 had at least one DOSH consultation visit and
  - 164 had at least one enforcement inspection during SFY 2011.
- Of the 803 accounts with DOSH enforcement inspections only, 575 (71.6%) accounts received at least one DOSH programmed inspection and 663 (82.6%) of the inspections was issued at least one citation during SFY 2011.

**Impact of DOSH enforcement inspections and consultations on compensable claims rates:**

DOSH enforcement and consultation activity was associated with substantial decreases in claims rates one year following the activity. After adjusting for average size of the accounts and the compensable rates in the pre-study period:

- Fixed-site industries
  - DOSH inspections were associated with an 18.8% greater decline in compensable claims rates from SFY2011 to SFY2012 than accounts with no DOSH activity ( $p < 0.05$ ).
  - DOSH consultations were associated with a 10.6% greater decline in compensable claims rates from SFY2011 to SFY2012 than accounts with no DOSH activity, though this was not statistically significant.
- Non-fixed-site industries
  - DOSH inspections were associated with an 11.2% greater decline in compensable claims rates from SFY2011 to SFY2012 than accounts with no DOSH, though this was not statistically significant.

- DOSH consultations were associated with a 10.1% increase in compensable claims rates from SFY2011 to SFY2012 relative to accounts with no DOSH activity, though this was not statistically significant. The very small number (n=22) of consultation activities eligible for this analysis may have played a role here.
- Size: Enforcement activity was found to have a greater impact among the **smaller** fixed-site accounts, those with 5-24 FTEs: DOSH enforcement inspections were associated with a 30.9% greater decline in compensable claims rates from SFY 2011 to SFY 2012 (p=0.0143). Consultation activities were associated with a 27.2% greater decrease in compensable claims rates for smaller accounts, though this was not statistically significant.

**Impact of DOSH enforcement with citation on compensable claims rates:**

When enforcement uncovers violations that result in citations there is a substantially greater decline in claims rates.

- Fixed-site industries: The cohort of 546 accounts that experienced a DOSH enforcement inspection with citations experienced 25.0% decline in compensable claims rates from SFY 2011 to SFY 2012 relative to the no DOSH cohort (p=0.01), while the 93 accounts without citation experienced a non-significant 4.8% relative increase in claims rate.
- Non-fixed-site industries: Enforcement with citations again was associated with a substantially larger decline in claims rates, though the effect was only of marginal statistical significance. The 117 accounts that experienced a DOSH enforcement inspection with citations experienced 22.8% decline in compensable claims rates from SFY 2011 to SFY 2012 relative to the no

DOSH cohort ( $p=0.085$ ), while the 47 accounts without citation experienced a non-significant 44.4% relative increase in claims rate.

## **Conclusions**

This one-year study fits well within the range of the results found in the analysis of ten years of DOSH enforcement and consultation and suggests that the magnitude of the decline in compensable claims rates following DOSH activity suggests that these interventions may trigger broad improvements in safety practices at visited workplaces that result in preventing injuries. The effect was strongest when enforcement inspections uncovered violations resulting in citations, but decreases in claims rates were also seen when no citation was issued and even when the DOSH activity was a voluntary consultation. As previously noted, the most significant impacts were found among the smaller employers and in fixed-site industries. This study suggests both enforcement inspection and consultation visits are making substantial contributions to reaching the agency's goal of reducing the workplace injury and illness rate in Washington State.

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