Study background
The Department of Labor (DOL) Behavioral Interventions project was launched to explore the potential of using behavioral insights to improve the performance and outcomes of DOL programs. It is sponsored by the DOL Chief Evaluation Office and draws on insights from behavioral economics, psychology, and related fields.

In this brief, we present initial findings on the effects of an intervention designed to increase employer responsiveness to the Occupational Safety and Health Administration (OSHA). Through a nationwide randomized controlled trial, we tested whether employers who were cited for health and safety violations would be more responsive if OSHA changed the way it issues and follows up on citations. Employer responsiveness is a critical component of fulfilling OSHA’s mission; when employers do not respond to citations, the agency cannot verify that workplace hazards have been corrected, and local offices must refer unresolved citations to the national office for enforcement and debt collection, a costly and burdensome process.

As part of the new process, OSHA staff: (1) gave employers a new handout as part of the preview of the citation process when they conducted their inspections, (2) used a new cover letter for citations, and (3) provided timely reminders, including a postcard and follow-up phone call, to employers about their response options and the corresponding deadlines. With the new process, OSHA staff also had access to Spanish-language versions of all materials, which had never been provided consistently on a national scale. The new process was based on insights from experienced field staff combined with findings from behavioral research, and aimed to address possible behavioral factors that may prevent employers from responding to citations.

About half of the nation’s local OSHA offices began implementing the new citation process in June 2015, while the other half continued their normal process, which involves only sending a comprehensive, written citation package. (The test included 27 states in 8 of OSHA’s 10 regions, and excluded two regions in which nearly all of the states operate their own job safety and health plans.) We then used OSHA records collected at the end of November 2015 to determine whether employers had positively engaged with OSHA in response to a citation. This brief presents information on the design of this new citation process and the findings on employer responsiveness.

KEY FINDINGS
- Changing the way that information was presented, along with providing timely reminders, caused more employers to respond to OSHA citations.
- The new citation process increased the share of employers who signed informal settlements and the share who made a payment toward their penalties.
- Follow-up research will determine if these improvements in employer responsiveness to citations translate into fewer cases requiring enforcement and debt collection.
Study goal
Promote safer work environments and save taxpayer dollars by “nudging” more employers to respond to citations and reducing the number of cases referred to the national office annually for costly enforcement and debt collection.

INTERVENTION DESIGN

Existing process. After an inspection, OSHA’s standard citation process involves issuing a written citation package that contains an explanation of the violations, the corrections that are required and any fines being imposed, and the employer’s options for responding to the citation. The employer then has 15 working days after receiving a citation to respond in one of three ways:

1. **Accept the citation**, agreeing to abate all the cited health or safety hazards and to pay the full amount of the penalty (or, if eligible, sign an expedited informal settlement agreement and pay a reduced penalty).

2. **Meet with a local OSHA official** to negotiate possible modifications to the citation, such as penalty reductions, through an informal settlement agreement. An employer may still contest within the 15-day response period if no agreement is reached.

3. **Legally contest** the citation.

In fiscal year 2013, OSHA issued citations in about 25,000 cases nationwide, assessing penalties for safety and health violations. Approximately 22 percent of these cases were ultimately referred to the national office, and in 75 percent of the referred cases, the employer had never responded to OSHA after receiving the citation.

Figure 1. Behavioral bottlenecks and procedures to address them

Behavioral factors. The DOL Behavioral Interventions (DOL-BI) team collaborated with OSHA representatives to identify potential behavioral factors that may lead employers not to engage with OSHA after receiving a citation, and ultimately result in referral to the national office. Figure 1 above shows possible behavioral bottlenecks that could emerge at each stage of an employer’s decision-making process. As the figure shows, three central themes emerged:
1. **Misunderstanding:** Employers may not understand why it is important to respond promptly to a citation.

2. **Inattention, procrastination, or forgetfulness:** Employers may not notice the citation package, delay opening or acting on it, or forget to deal with it.

3. **Complexity:** Employers may struggle to find the information they need to choose a response.

**Process changes.** To address these barriers, the DOL-BI team, in close consultation with OSHA, developed three changes to the standard citation process:

1. **Preview the citation process:** Walk through a new handout with employers during the initial inspection, explaining what they can expect and what their response options are if they receive a citation.

2. **Improve the cover letter:** Develop a clearer, more informative cover letter, including a concise explanation of the employer’s response options and emphasizing the importance of prompt action.

3. **Provide timely reminders:** Send postcards and make follow-up telephone calls to employers about their response options and critical deadlines.

Exhibits 1 and 2 at the end of this brief illustrate how the new citation process modifies OSHA’s existing practices.

**STUDY DESIGN**

Beginning in June of 2015, OSHA and the DOL-BI team randomly assigned local offices nationwide to either implement the new citation process or keep using their normal process. The research team collected data from OSHA’s administrative systems in November 2015 and used the data to determine whether, as a result of the new citation process, employers had taken any of three actions: (1) signed an informal settlement agreement, (2) paid at least some of their penalties, or (3) contested their citation. OSHA viewed any of these steps as positive engagement by the employer with the citation process.

**FINDINGS**

The new process caused more employers who received a citation to engage with OSHA. The employers who were part of the new citation process were 3.9 percentage points more likely to engage with OSHA by signing an informal settlement, paying at least some of their fines, or formally contesting their citation (Figure 2).

The new process increased the share of employers who signed informal settlements and the share who made a payment toward their penalties. Among employers who were part of the new citation process, the proportion that signed an informal settlement agreement was 6.3 percentage points higher than the rate for employers who were part of the existing processes (Figure 3). The employers who were subject to the new process were also more likely to make a payment toward the penalties they owed.

**Figure 2. Impact of new procedures on employers’ engagement with OSHA**

<table>
<thead>
<tr>
<th>Percentage engaged</th>
<th>New citation process</th>
<th>Existing citation process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.9</strong> percentage points</td>
<td>86.4%</td>
<td>82.5%</td>
</tr>
</tbody>
</table>

**Difference is statistically significant at the 0.01 level.**

**Figure 3. Impact on share of employers choosing each response type**

<table>
<thead>
<tr>
<th>Response Type</th>
<th>New citation process</th>
<th>Existing citation process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal settlement</td>
<td>72.7%**</td>
<td>66.4%</td>
</tr>
<tr>
<td>Made a payment</td>
<td>75.9%**</td>
<td>73.1%</td>
</tr>
<tr>
<td>Formal contest</td>
<td>7.2%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

**Difference is statistically significant at the 0.01 level.**
These improvements in employer responsiveness to OSHA citations may translate into fewer cases being referred to the national office. From these results, based on historical trends, we would expect that between 750 and 1,000 fewer cases would be referred to the OSHA national office for enforcement and debt collection—a 14- to 18-percent reduction from the current rate. Follow-up research will directly measure effects on referrals, with results available by fall 2016.

**IMPLICATIONS AND NEXT STEPS**

The early results from this study show how principles of behavioral science can be applied to design strategies to overcome a persistent challenge in an important, ongoing program. In this case, the new citation process “nudged” more employers to engage with OSHA. For some employers who would not otherwise have responded to OSHA, the combination of strategies that we tested clearly led to action.

OSHA managers found that the reminder phone calls required a substantial amount of staff time to complete. Consistent with their goal to continuously improve their processes while promoting a high level of employer engagement, they decided to test whether a more limited set of changes to the citation process could bring about similar improvements in employer responsiveness. A second phase of testing is underway to answer this question, and results are anticipated in fall 2016.

Submitted to:
United States Department of Labor Chief Evaluation Office
Office of the Assistant Secretary for Policy
200 Constitution Ave. NW
Washington, DC 20210

Project Officer: Megan Lizik

Contract Number: DOLG129633249/DOL-OPS 4-U-00001

This brief was prepared with funding from the U.S. Department of Labor. The views expressed are those of the authors and should not be attributed to the Federal Government or the Department of Labor.

Submitted by:
Mathematica Policy Research
P.O. Box 2393
Princeton, NJ 08543-2393

Project Director:
Irma Perez-Johnson

**Exhibit 1. Timing of new communications strategies**

<table>
<thead>
<tr>
<th>Stage of citation process</th>
<th>Steps in existing citation process</th>
<th>Modified element (timing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspection</td>
<td>1. Closing conference takes place</td>
<td>Inspector presents new handout to employer at closing conference</td>
</tr>
<tr>
<td>Citation development</td>
<td>2. Area office mails citation to employer</td>
<td>Support staff generates new cover letter to include in citation package</td>
</tr>
<tr>
<td>Employer response period (15 working days)</td>
<td>3. Employer receives citation</td>
<td>Support staff fills out reminder postcard and sends to employer, using delivery date from citation delivery confirmation. (as soon as possible)</td>
</tr>
<tr>
<td>Payment past due</td>
<td>4. Area office receives delivery confirmation</td>
<td>Support staff uses employer response deadline, based on citation delivery confirmation, in a reminder phone call to the employer (if EISA-eligible) (as soon as possible, starting 10 working days after citation delivery to employer)</td>
</tr>
<tr>
<td></td>
<td>5. Employer response due 15 working days after citation is delivered</td>
<td></td>
</tr>
</tbody>
</table>
Exhibit 2. Citation cover letter for employers who are eligible for an expedited settlement

Este documento es muy importante. Si ud. no habla inglés, busque un traductor o llame al (555) 555-5555.

U.S. Department of Labor          Occupational Safety and Health Administration
                                      1995 Jones Road
                                      Atlanta, GA 30339
                                      Phone: (555) 555-5555 Fax: (999) 984-8855

November 6, 2015

Dear John Smith,

On 10/22/2015, an OSHA compliance officer met with you or your representative as part of an inspection at 4040 Example Drive Roswell, GA 30076. This letter includes the citations for the violations that were found (see summary below). Please choose one of the three options from the box to the right and complete the associated steps found on the following page within 15 working days. Please call us if you have any questions about the enclosed citation and/or penalties; we are here to help you choose the best option to resolve your citation as quickly as possible.

Sincerely,

Jane Smith, Area Director

---

**Your Citation Summary**

Acme Unlimited  
Inspection Number: 1212121

<table>
<thead>
<tr>
<th>Total Amount Due:</th>
<th>$4800.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment Due Date:</td>
<td>15 working days after receipt of this letter</td>
</tr>
</tbody>
</table>

You must correct each violation by the date listed in the Citation and Notification of Penalty. Please see the violations and the correction deadline for each violation starting on page 6.

**Total Number of Violations:** 3  
**Your First Correction Deadline is:** 12/01/15

---

**Step 1 – Chose a Response Option and Act within 15 working days**

Respond now before you lose the ability to discuss potential adjustments to penalty amounts and/or due dates. Please choose one option below and complete the steps on the next page.

**Option #1 – Correct and Pay**

I agree with the citation and correction deadlines, and do not contest.

**Expedited Informal Settlement Agreement (EISA)**

Because you have acted in good faith and your inspection revealed no instances of repeat, willful or other high-gravity violations, we can offer to reduce your penalty.

Your REDUCED total penalty is: $2880.00

This is a reduction of 40%.

**Option #2 – Discuss with OSHA**

I would like to discuss this citation with an OSHA representative. This may lead to changes in the penalty amount, due date and/or correction deadlines (if appropriate).

**Option #3 – Contest the Citation**

I do not agree with the citation, penalties, and/or correction deadlines, and would like to contest.
### Exhibit 2 (continued). Citation cover letter for employers who are eligible for an expedited settlement

**Step 2 – Complete One Option Checklist**

Please post a copy of the citation at or near the place where each violation occurred, even if you plan to contest. You can use the checklist to the right to help plan your next steps. Please do not send in your checklist.

<table>
<thead>
<tr>
<th>Option #1 – Correct Violations and Pay REDUCED Total Penalty</th>
<th>I will complete by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Read the EISA attachment, sign the first page, and mail the signed EISA form to the OSHA office listed on page 1, <strong>postmarked within 15 working days.</strong></td>
<td>☐ __ / __</td>
</tr>
<tr>
<td>2. Correct violations, then complete and mail the attached “Certification of Corrective Action Worksheet” along with the appropriate evidence of repair (e.g. photos, purchase orders, etc.) to the OSHA office listed on the first page, <strong>postmarked within 10 calendar days after each violation’s correction deadline and include any required evidence. If these documents are transmitted by means other than mailing, the date the Agency receives the document is the date of submission.</strong></td>
<td>☐ __ / __</td>
</tr>
<tr>
<td>3. Pay the <strong>REDUCED Total Penalty</strong> by using one of the following methods: <strong>Include your Inspection Number (see first page) on the payment.</strong></td>
<td>☐ __ / __</td>
</tr>
</tbody>
</table>

**Pay Online:** Search “OSHA” on [www.pay.gov](http://www.pay.gov) and complete the “OSHA Penalty Payment Form.” Pay by debit, credit or Automated Clearing House (ACH) **within 15 working days.** Penalties over $25,000 must be paid by ACH and require a Transaction ID (Call 202-693-2170 to obtain one).

**Pay by Check:** Mail check or money order payable to “DOL-OSHA” for the **REDUCED Total Penalty** to the OSHA office listed on the first page **within 15 Working days.**

<table>
<thead>
<tr>
<th>Option #2 – Discuss with OSHA</th>
<th>I will complete by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Call: Jane Smith, Area Director, at (555) 555-5555 as soon as possible to schedule a meeting with an OSHA representative that must occur within 15 working days of receiving this citation. Bring supporting documentation of existing conditions and corrections done thus far. If necessary, you can still contest the citation after this meeting. <strong>This meeting does not extend your 15 working day deadline to contest the citation.</strong></td>
<td>☐ __ / __</td>
</tr>
<tr>
<td>2. Fill in and post the attached “Notice to Employees OSHA Informal Conference” after scheduling the meeting.</td>
<td>☐ __ / __</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option #3 – Contest the Citation</th>
<th>I will complete by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mail a letter of intent to legally contest to the OSHA office listed on the first page <strong>postmarked within 15 working days.</strong></td>
<td>☐ __ / __</td>
</tr>
</tbody>
</table>