Compliance Interventions on the Behaviors of Third Party Lead Contractors

Ben S. Meiselman
Johns Hopkins University
Postdoctoral Research Fellow
November 8, 2018
EPIC works with environmental program managers to develop evidence-based programs

Paul Ferraro
Director
Bloomberg Distinguished Professor

Ben Meiselman
Postdoctoral Research Fellow
We believe a “test, learn, adapt” strategy will lead to better environmental outcomes at lower costs.

We have found the following conditions are favorable:

1. Exposure control
2. Sample size
3. Observable outcomes
4. Elucidate how and why
5. Catalyst for broader innovation
The incentives of regulators and regulatory intermediaries are sometimes misaligned
The incentives of regulators and regulatory intermediaries are sometimes misaligned.
The incentives of regulators and regulatory intermediaries are sometimes misaligned.
Third party contractors certify the lead safety of homes to the Maryland Department of the Environment
Third party contractors certify the lead safety of homes to the Maryland Department of the Environment.

- Notification
- Inspection
- Certificate
Third party contractors certify the lead safety of homes to the Maryland Department of the Environment

[Diagram]

- Notification
- Inspection
- Certificate
- Pass
- Fail
Third party contractors certify the lead safety of homes to the Maryland Department of the Environment
Third party contractors certify the lead safety of homes to the Maryland Department of the Environment

![Diagram]

- Notification → Inspection
  - Pass → Certificate
  - Fail → Abatement Project
- Notification → Abatement Project
Contractors frequently fail to submit notifications and certificates

Notifications
- MDE receives approximately 5,000 notifications per quarter
- We estimate 15,000 are required (67% noncompliance rate)

Certificates
- MDE receives approximately 10,200 certificates per quarter
- We estimate 10,800 are required (5% noncompliance rate)
Letters made penalties salient

In 2017, the Lead Poisoning Prevention Program assessed $2.3 million in penalties for lead violations, and it obtained an administrative order of $100,000 against a single lead contractor with multiple violations.

Statutory penalty
Failure to notify the Maryland Department of the Environment at least 24 hours before a lead inspection is a misdemeanor punishable by a fine of up to $25,000 and up to 2 years in prison.
Letters made penalties salient

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Message in prominent box</th>
</tr>
</thead>
<tbody>
<tr>
<td>General deterrence</td>
<td>In 2017, the Lead Poisoning Prevention Program assessed $2.3 million in penalties for lead violations, and it obtained an administrative order of $100,000 against a single lead contractor with multiple violations.</td>
</tr>
</tbody>
</table>
In 2017, the Lead Poisoning Prevention Program assessed $2.3 million in penalties for lead violations, and it obtained an administrative order of $100,000 against a single lead contractor with multiple violations.

Failure to notify the Maryland Department of the Environment at least 24 hours before a lead inspection is a misdemeanor punishable by a fine of up to $25,000 and up to 2 years in prison.
September 5, 2018

FIRSTNAME LASTNAME
LEAD CONTRACTOR, LLC
1234 MAIN STREET
BALTIMORE, MD 21201

RE: LEAD INSPECTION NOTIFICATIONS

Dear Firstname Lastname:

To protect the health and well-being of Marylanders, the Maryland Department of the Environment is reminding lead inspection contractors of obligations under the Code of Maryland Regulations (COMAR) 26.16.01-26.16.06.

COMAR 26.16.05.04 requires lead inspection contractors to notify the Department at least 24 hours before a lead inspection. Complying with this requirement is straightforward.

1. Download the lead inspection notification form at [www.mde.maryland.gov/lead/InspectionNotification](http://www.mde.maryland.gov/lead/InspectionNotification) or request a form by calling (410) 537-3825.
2. Complete the form electronically or by hand.
3. Email the form to the Lead Poisoning Prevention Program at mde.lppp@maryland.gov with “inspection notice” in the subject line, or fax the form to (410) 537-3156.

In 2017, the Lead Poisoning Prevention Program assessed $2.3 million in penalties for lead violations, and it obtained an administrative order of $100,000 against a single lead contractor with multiple violations.

The penalties for failing to notify the Department before a lead inspection are described in the Annotated Code of Maryland, Environment Article, §6-422 and §7-266.

If you have already been complying with this requirement, we thank you.

If you have any questions, please contact us at (410) 537-3825 or visit the Lead Poisoning Prevention Program website at [www.mde.maryland.gov/lead](http://www.mde.maryland.gov/lead).

Sincerely,

Michelle Armiger
Division Chief, Lead Accreditation & Oversight
To protect the health and well-being of Marylanders, the Maryland Department of the Environment is reminding lead inspection contractors of obligations under the Code of Maryland Regulations (COMAR) 26.16.01-26.16.06. COMAR 26.16.05.04 requires lead inspection contractors to notify the Department at least 24 hours before a lead inspection. Complying with this requirement is straightforward.

1. Download the lead inspection notification form at www.mde.maryland.gov/lead/InspectionNotification or request a form by calling (410) 537-3825.
2. Complete the form electronically or by hand.
3. Email the form to the Lead Poisoning Prevention Program at mde.lppp@maryland.gov with “inspection notice” in the subject line, or fax the form to (410) 537-3156.

In 2017, the Lead Poisoning Prevention Program assessed $2.3 million in penalties for lead violations, and it obtained an administrative order of $100,000 against a single lead contractor with multiple violations.

The penalties for failing to notify the Department before a lead inspection are described in the Annotated Code of Maryland, Environment Article, §6-422 and §7-266.

If you have already been complying with this requirement, we thank you.

If you have any questions, please contact us at (410) 537-3825 or visit the Lead Poisoning Prevention Program website at www.mde.maryland.gov/lead.

Sincerely,

Michelle Armiger
Division Chief, Lead Accreditation & Oversight
Contractors were randomly assigned to a message treatment and an attention treatment.
Contractors were randomly assigned to a message treatment and an attention treatment

Message treatments
- Letter-only control (CO)
- General deterrence (GD)
- Statutory penalty (SP)

<table>
<thead>
<tr>
<th>Attention</th>
<th>Message</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0EM</td>
<td>98</td>
<td>293</td>
</tr>
<tr>
<td>1EM</td>
<td>98</td>
<td>293</td>
</tr>
<tr>
<td>3EM</td>
<td>97</td>
<td>290</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>292</strong></td>
<td><strong>292</strong></td>
</tr>
</tbody>
</table>

EPIC
Contractors were randomly assigned to a message treatment and an attention treatment

<table>
<thead>
<tr>
<th>Message treatments</th>
<th>Attention treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter-only control (CO)</td>
<td>No-email control (0EM)</td>
</tr>
<tr>
<td>General deterrence (GD)</td>
<td>One-time email (1EM)</td>
</tr>
<tr>
<td>Statutory penalty (SP)</td>
<td>Repeated emails (3EM)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>0EM</th>
<th>1EM</th>
<th>3EM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>98</td>
<td>98</td>
<td>97</td>
<td>293</td>
</tr>
<tr>
<td>GD</td>
<td>97</td>
<td>98</td>
<td>98</td>
<td>293</td>
</tr>
<tr>
<td>SP</td>
<td>97</td>
<td>96</td>
<td>97</td>
<td>290</td>
</tr>
<tr>
<td>Total</td>
<td>292</td>
<td>292</td>
<td>292</td>
<td>876</td>
</tr>
</tbody>
</table>
Contractors were randomly assigned to a message treatment and an attention treatment.

**Message treatments**
- Letter-only control (CO)
- General deterrence (GD)
- Statutory penalty (SP)

**Attention treatments**
- No-email control (0EM)
- One-time email (1EM)
- Repeated emails (3EM)

<table>
<thead>
<tr>
<th>Message</th>
<th>Attention</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0EM</td>
<td>1EM</td>
</tr>
<tr>
<td>CO</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>GD</td>
<td>97</td>
<td>98</td>
</tr>
<tr>
<td>SP</td>
<td>97</td>
<td>96</td>
</tr>
<tr>
<td>Total</td>
<td>292</td>
<td>292</td>
</tr>
</tbody>
</table>
Review of favorable conditions
Review of favorable conditions

- Exposure control
  - Embedded in program operations, randomly assigned treatment with stratification
Review of favorable conditions

- **Exposure control**
  - Embedded in program operations, randomly assigned treatment with stratification

- **Sample size**
  - Power analysis simulation indicated sufficient to detect relatively small changes in behavior
Review of favorable conditions

- Exposure control
  - Embedded in program operations, randomly assigned treatment with stratification

- Sample size
  - Power analysis simulation indicated sufficient to detect relatively small changes in behavior

- Observable outcomes
  - Notifications received by Lead Poisoning
Review of favorable conditions

- Exposure control
  - Embedded in program operations, randomly assigned treatment with stratification
- Sample size
  - Power analysis simulation indicated sufficient to detect relatively small changes in behavior
- Observable outcomes
  - Notifications received by Lead Poisoning
- Elucidate how and why
  - Penalty salience, likelihood and severity of punishment
  - Allocation of limited attention to electronic channels
Review of favorable conditions

- Exposure control
  - Embedded in program operations, randomly assigned treatment with stratification

- Sample size
  - Power analysis simulation indicated sufficient to detect relatively small changes in behavior

- Observable outcomes
  - Notifications received by Lead Poisoning

- Elucidate how and why
  - Penalty salience, likelihood and severity of punishment
  - Allocation of limited attention to electronic channels

- Catalyst for broader innovation
  - Scale up, refine with other populations
Plan for next phase

Limited capacity to issue penalties

Randomly assign when violators are penalized

Measure effect of specific deterrence on behavior
Thank you

www.epic-evidence.org

Paul Ferraro
Director
pferraro@jhu.edu

Ben Meiselman
Presenter
meiselman@jhu.edu