Tracking Work-Related Lung Diseases in Michigan

Additional Information Available at: www.oem.msu.edu

Summary Statistics*

<table>
<thead>
<tr>
<th>Lung Disease 1988-2016</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-Related Asthma</td>
<td>3417</td>
</tr>
<tr>
<td>Silicosis</td>
<td>1179</td>
</tr>
<tr>
<td>Coalworkers' Pneumoconiosis</td>
<td>123</td>
</tr>
<tr>
<td>Hard Metal Lung Disease</td>
<td>17</td>
</tr>
<tr>
<td>Chronic Beryllium Disease</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lung Disease 2009-2016</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestosis</td>
<td>2491</td>
</tr>
<tr>
<td>Chemical Irritation</td>
<td>694</td>
</tr>
<tr>
<td>Hypersensitivity Pneumonitis</td>
<td>146</td>
</tr>
<tr>
<td>Chemical Pneumonitis</td>
<td>126</td>
</tr>
<tr>
<td>Smoke Inhalation</td>
<td>59</td>
</tr>
<tr>
<td>COPD Exacerbation</td>
<td>43</td>
</tr>
<tr>
<td>Irritative Bronchitis</td>
<td>34</td>
</tr>
<tr>
<td>Infectious Agent</td>
<td>26</td>
</tr>
<tr>
<td>Allergies/Allergic Rhinitis</td>
<td>25</td>
</tr>
<tr>
<td>Pneumoconiosis Unspecified</td>
<td>9</td>
</tr>
<tr>
<td>Silo Related Respiratory Ill.</td>
<td>9</td>
</tr>
<tr>
<td>Metal Fume Fever</td>
<td>5</td>
</tr>
<tr>
<td>Siderosis</td>
<td>3</td>
</tr>
<tr>
<td>Acute Respiratory Distress Syndrome</td>
<td>2</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>2</td>
</tr>
<tr>
<td>Bronchiectasis</td>
<td>1</td>
</tr>
<tr>
<td>Bronchiolitis Obliterans</td>
<td>1</td>
</tr>
<tr>
<td>Respiratory Bronchiolitis</td>
<td>1</td>
</tr>
</tbody>
</table>

*Based on complete reporting from ___ of 134 hospitals reporting 2016 data as of 3-29-2017.

Background

In 1988 the State of Michigan instituted a tracking program for silicosis, with financial assistance from the National Institute for Occupational Safety and Health. This is a joint project of the Michigan Occupational Safety and Health Administration (MIOSHA) and the Michigan State University (MSU) Department of Medicine. The incidence of silicosis cases in Michigan has been declining since the late 1990s. In an effort to continue to identify, understand and prevent other work-related lung disease, the tracking program was expanded in 2010 to include other dust diseases such as Asbestosis, Chronic Beryllium Disease, Hypersensitivity Pneumonitis (HP) and Hard Metal Lung Disease. Newly-identified cases are interviewed about their exposures and work history and MIOSHA enforcement workplace inspections may be conducted to determine if other employees are at risk of developing lung disease.

March 29, 2017
Work-Related Lung Disease Case Narratives

- **Chemical Irritation:** A female in her 20s was placed through a temporary agency at a blueberry processing facility. Almost immediately after starting work, she developed chest tightness, shortness of breath, wheezing and a cough from exposure to chlorine, which was used to process the blueberries. She sought treatment at an emergency department and was prescribed an inhaler. She left this job, and since then she no longer experienced any breathing symptoms and no longer required the use of an inhaler.

- **Hard Metal Lung Disease:** A male in his 60s was diagnosed with hard metal pneumoconiosis from a lung biopsy. He was exposed to cobalt from grinding metal at a tool and die shop for 6 years with no respiratory protection. He had also worked for 28 years at an automotive manufacturing facility where he was exposed to coolant fumes. He had never smoked cigarettes.

Program Highlights: Silicosis

- 85% of MI silicosis patients worked in manufacturing, primarily foundries
- MIOSHA enforcement inspections at the workplaces of the silicosis patients reveal that over one-third of companies inspected had silica exposure measurements over the permissible limit

Distribution of Michigan Residents Diagnosed with Mesothelioma: 1999-2013

The south-central region of Michigan has the highest number of cases of mesothelioma. The Saginaw-Bay county area cases can be attributed to exposure to asbestos in foundries and shipyard work. The counties with the highest annual incidence rates of mesothelioma are:

- **Bay** 2.4 per 100,000
- **Marquette** 2.3 per 100,000
- **Midland** 2.0 per 100,000
- **Muskegon** 1.8 per 100,000