Biosafety Training and Incident Reporting Practices: A Survey of Biosafety Professionals in the U.S.

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Background

Workshop held in January 2008
- Sponsored by SERCEB PEL/SERCEB Biosafety
- Purpose: to gather info on incident reporting practices among SERCEB schools
- Biosafety training and incident reporting practices vary widely
- Before best practices in either training or reporting can be discussed, more information needs to be gathered → survey
Survey Design

- Biosafety professionals [vs. laboratory workers]
- Target population: practicing biosafety professionals within the US
- Anonymous, 50-question, web-based survey (SurveyMonkey)
- Pilot tested in April 2008
- Web-based version sent out to all ABSA members (~1700); open for 1 month
- IRB approved
Survey Respondents

- 318 individuals took the survey
  - 258 eligible
  - 240 chose to participate
44% biosafety officers
13% EH&S officers
13% EH&S directors
30% other (includes biosafety advisors, IBC members, animal care and use directors, biosafety managers, etc.)
Scope of Questions

- Biosafety training practices
- Safety compliance and oversight practices
- Incident reporting
- Biosafety attitudes and culture
Preliminary results on selected topics
## Biosafety training requirements

<table>
<thead>
<tr>
<th>Respondents from institutions without BSL-3/ABSL-3 labs (n=73)</th>
<th>Respondents from institutions with both BSL-2/ABSL-2 and BSL-3/ABSL-3 labs (n=154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSL-2/ABSL-2 training (N=70)</td>
<td>BSL-2/ABSL-2 training (n=142)</td>
</tr>
<tr>
<td>6% do not require training of any individuals</td>
<td>9% do not require training of any individuals</td>
</tr>
<tr>
<td></td>
<td>All require training</td>
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6% do not require training of any individuals
9% do not require training of any individuals
All require training
Who is required to take biosafety training?

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<tbody>
<tr>
<td></td>
<td>BSL-2/ABSL-2 training (n=66)</td>
<td>BSL-2/ABSL-2 training (n=129)</td>
</tr>
<tr>
<td>Senior scientists/faculty</td>
<td>91%</td>
<td>88%</td>
</tr>
<tr>
<td>Lab staff/students</td>
<td>97%</td>
<td>95%</td>
</tr>
<tr>
<td>Visiting scientists</td>
<td>74%</td>
<td>76%</td>
</tr>
<tr>
<td>Custodial/maintenance</td>
<td>47%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Biosafety training mechanisms used most frequently by biosafety level

<table>
<thead>
<tr>
<th></th>
<th>BSL-2/ABSL-2</th>
<th>BSL-3/ABSL-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person instruction:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS/EH&amp;S officer</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>PI or lab manager</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Online or e-educational modules: used more frequently at the BSL-2/ABSL-2 level than BSL-3/ABSL-3 level
Hands-on training: biohazardous spills

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<tbody>
<tr>
<td>Yes</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>No</td>
<td>79%</td>
<td>68%</td>
</tr>
<tr>
<td>Not sure</td>
<td>2%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Primary responsibility for teaching biosafety training to new lab workers

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</thead>
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<tr>
<td>Lab PI or manager</td>
<td>BSL-2/ABSL-2 (n=69) 39%</td>
<td>BSL-2/ABSL-2 (n=141) 31%</td>
</tr>
<tr>
<td>Biosafety or EH&amp;S officer</td>
<td>BSL-2/ABSL-2 (n=141) 55%</td>
<td>BSL-3/ABSL-3 (n=140) 60%</td>
</tr>
<tr>
<td>Occup H&amp;S officer</td>
<td>BSL-2/ABSL-2 (n=141) 6%</td>
<td>BSL-3/ABSL-3 (n=140) 5%</td>
</tr>
</tbody>
</table>
Primary responsibility to train at the BSL-2/ABSL-2 level: perception of lab safety

- **Biosafety or EH&S officer (n=102)**
  - 91 (89%) indicated that they believe the labs they work with or oversee are safe

- **Lab manager or PI (n=64)**
  - 43 (67%) indicated that they believe the labs they work with or oversee are safe
Primary responsibility to train at the BSL-3/ABSL-3 level: perception of lab safety

- **Biosafety or EH&S officer (n=76)**
  - 63 (83%) indicated that they believe the labs they work with or oversee are safe places to work

- **Lab manager or PI (n=39)**
  - 27 (69%) indicated that they believe the labs they work with or oversee are safe places to work
Provide explicit instruction on incident reporting: perception of lab safety

- **YES**: n=154
  - 134 (87%) feel strongly to very strongly that the labs they oversee or work with are safe places to work

- **NO**: n=44
  - 21 (48%) feel strongly to very strongly that the labs they oversee or work with are safe places to work
Summary

- The majority of scientists/students/staff at both the BSL-2/ABSL-2 and BSL-3/ABSL-3 levels receive biosafety training, but gaps remain
  - Attention to maintenance staff and visiting scientists
  - Hands-on training
- Biosafety and EH&S professionals who train new lab workers on biosafety and incident reporting practices are more likely to perceive the labs they work with as safe
Acknowledgements

- Ruth Berkelman, MD---Emory University
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- ABSA
Thank you