Workshop on repellents
Comments from Industry
Vienna 22\textsuperscript{nd} & 23\textsuperscript{rd} June 2016
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Industry Challenges

Mutual recognition

- Harmonisation of labels (‘instructions for use’) across all member states
  - Avoids errors with labels handled regionally
  - Single market = ‘single’ consumer

- Consumer friendly use instructions
  - Relevant to product format
Conservative Nature of Repellent Risk Assessments

Hazard x Exposure = Risk

For DEET the hazard assessment for dermal exposure was not based on an actual toxic effect, which is the traditional approach, rather the highest dose tested. Result: a conservative estimate of the hazard

Conservative exposure assumptions are generally made that are not necessarily indicative of consumer use patterns. Result: a conservative estimate of the potential exposure

Combining conservative hazard and exposure values results in over-estimation of potential risk which does not reflect historical experience.
Relationship Between Efficacy and Exposure Estimates

• Should the application rate from the efficacy studies or consumer use data be used to create meaningful use directions?
  • There have been examples of both approaches from different Member States
  • Industry have consumer use data that shows consumers do not apply the dose used in efficacy studies
  • Consumer data approach is used by other Regulatory agencies (E.g. EPA).

• What human default parameters should be used? Some of the parameters that have been chosen as default exposure values do not reflect product use restrictions.
  • For example, the EU HEEG Opinion on default human factors for use in exposure assessments uses a 25\textsuperscript{th} percentile body weight of females under the age of 2 when DEET products are restricted for use in children under 2 according to BPR approval of DEET (i.e., age groups do not match allowable uses).

Both of these points affect (or limit) the acceptable area of the body that can be treated and impact efficacy as untreated areas are not protected.
Relationship Between Efficacy and Human Health

- How should body surface area be expressed for product use directions?
  - Seen examples of some Member States assuming an **average exposed body surface area** and another where use instructions are provided by **specific body part**.
  - The issue with specific body parts is that it is difficult to provide clear use instructions for the consumer to achieve the desired application rate.
  - For specific body parts, all possibilities cannot be explicitly prescribed on the label.
  - Prescribing one combination of allowable treated area, could be interpreted that it is dangerous to apply elsewhere.

**How can this be converted to meaningful use directions on the product label?**

<table>
<thead>
<tr>
<th>Adult</th>
<th>Adult</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Combo 1</td>
<td>Combo 2</td>
<td>Combo 3</td>
<td>Combo 4</td>
</tr>
<tr>
<td>Face</td>
<td>Face</td>
<td>Face</td>
<td>Face</td>
</tr>
<tr>
<td>lower arms</td>
<td>lower arms</td>
<td>lower arms</td>
<td>Neck</td>
</tr>
<tr>
<td>lower legs</td>
<td>lower legs</td>
<td>upper arms</td>
<td>Lower arms</td>
</tr>
<tr>
<td>Backs of hands</td>
<td>Neck</td>
<td>feet</td>
<td>hands</td>
</tr>
<tr>
<td>2x per day</td>
<td>2x per day</td>
<td>2x per day</td>
<td>2x per day</td>
</tr>
</tbody>
</table>

| Child ≥ 2 | Child ≥ 2 | Child ≥ 2 | Child ≥ 2 | Child ≥ 2 |
| Combo 1   | Combo 2   | Combo 3   | Combo 4   | Combo 5   |
| Face      | Face      | Face      | Face      | Face      |
| lower arms | lower legs | lower arms | neck      | lower arms |
| neck      | upper feet | feet      | lower legs | legs      |
| 2x per day | 2x per day | 2x per day | 2x per day | 1x per day |

Sample of possible combinations that remain within acceptable treatable area
Concluding Remarks

• The dosage used in efficacy studies, the exposure estimates and the eventual use instructions are interlinked
• Consequently the chosen study design could have a big impact on risk assessments and product labels.
• A recommendation was discussed at the HEAdhoc meeting April 2016. “Product application amount for repellents – exposure assessment”.
  • Will this be shared in the near future so we can ensure harmonisation of our calculations for future dossiers?
  • Can industry contribute their experience to help?
THANK YOU

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