A comparison of expert and lay perceptions of wildlife health and disease

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Wildlife disease manager’s model

Delphi method → expert perceptions

• Expert panel of 18 wildlife health professionals from U.S. and Canada
  - 44% government, 38% academia, 17% NGO
  - DVMs and non-DVMs
  - 10 states, 1 province represented
Focus groups → lay perceptions

• 5 locations, 34 participants
  ▪ 68% male, 32% female
  ▪ 61% hunters, 67% anglers
  ▪ 41% urban, 29% suburban, 38% rural

• Follow-up survey with focus group participants
Wildlife health

Physical and physiological condition
Population sustainability
Ecosystem health
Habitat quality
Population resiliency
Multiple stressors
Population balance

Blue = laypersons; Red = both experts and lay persons; Green = experts
Threats to wildlife health

- Environmental contamination
- Invasive species
- Habitat loss
- Human encroachment/population growth
- Translocation of wildlife
- Specific diseases
- Species over-abundance

Blue = laypersons; Red = both experts and lay persons; Green = experts
## Concerns about wildlife disease

<table>
<thead>
<tr>
<th>Concern</th>
<th>Group more likely to select</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious reductions in wildlife populations</td>
<td>Lay persons ($X^2$; $P=.013$)</td>
</tr>
<tr>
<td>Threat to human health</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Devaluation of wildlife (because of public fear)</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Disruption of ecological communities</td>
<td>No significant difference</td>
</tr>
<tr>
<td>Threat to domestic animal health</td>
<td>No significant difference</td>
</tr>
</tbody>
</table>
Concern about risks from wildlife disease

Scale of 1-5: 1 = not concerned to 5 = very concerned

<table>
<thead>
<tr>
<th></th>
<th>Expert</th>
<th>Lay person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human health</td>
<td>4.06</td>
<td>2.79</td>
</tr>
<tr>
<td>Domestic animal health</td>
<td>3.83</td>
<td>2.97</td>
</tr>
<tr>
<td>Wildlife health</td>
<td>4.33</td>
<td>4.09</td>
</tr>
</tbody>
</table>
Expert assessments & perceptions of risks

Bridging the GAP

Lay person assessments & perceptions of risks

informs

Communication efforts
High degree of conceptual common ground between experts and lay persons
“The perception that all disease in wild animals is a natural phenomenon and that nature will take care of itself, is still prevalent.” (Wobeser 2007)

Both groups acknowledged that disease is a natural, normal part of life.

Experts more likely to believe that disease conditions have been altered by humans.
“The diseases and illnesses within all types of wildlife, that’s part of creation. X amount of skunks are gonna have rabies. *Not to have those rabies in skunks would be an unnatural situation.*”

“Pathogens and parasites are natural organisms within ecosystems. *What is not natural is how humans have changed which ones are present...*”
“The public and policymakers respond more readily to a focus on disease than on health.”

- High concern for wildlife health among stakeholders
- Concern about personal health risks from wildlife disease was low
“Public outreach and education are important parts of wildlife disease management.”

Lack of knowledge & personal awareness of wildlife disease issues

Occurrence of “naïve” beliefs
“[White nose syndrome] will improve the overall health of our bat population.” [MI]

“Rabies is a disease that in the long run will manage itself.” [NY]

“If we quit trying to manage then maybe it would all kinda fix itself given enough time.” [OR]
Thank you!

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