Academic-public health-community partnership for prevention and control of intestinal parasites infection in endemic area using One Health approach: a field observation research

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Challenges

• Intestinal parasites are prevalent in low socio-economic tropical regions, especially among immigrant and refugee communities.
• At Thai-Myanmar border, Tha Song Yang district, Tak Province, has one of the highest intestinal parasites prevalence in Thailand.

Objectives

• To utilize One Health approach to explore risk factors of intestinal parasitic infection in endemic area.
• To constitute problem solving for further strategic planning to reduce disease burden.

Methodology

• Human stool sample collection
• Domestic animal stool sample collection
• Questionnaires
• Multi-sectorial brain-storming

Major Findings

1. Demographic data

<table>
<thead>
<tr>
<th>Gender</th>
<th>Education level</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>University</td>
<td>50%</td>
</tr>
<tr>
<td>Male</td>
<td>Vocational study</td>
<td>4.5%</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>23.3%</td>
</tr>
<tr>
<td></td>
<td>Secondary school</td>
<td>33.8%</td>
</tr>
<tr>
<td></td>
<td>Primary school</td>
<td>26.3%</td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>11.3%</td>
</tr>
</tbody>
</table>

2. Risk factors of parasitic infection

• Use of untreated tap water for consumption
• High source of transmission: intestinal parasites
• Lack of knowledge
• Infective forms of parasites were found in domestic animal stool samples.
• Domestic animals were living closely together with human.
• Domestic animal waste was poorly handled.

3. Problem solving strategies

• Organize training for health volunteers for active case finding and reporting by community participation.
• Organize training for laboratory technicians to accurately diagnose intestinal parasites by simple microscopic techniques.
• Facilitating and mediating multi-sectorial discussion and collaboration for target-specific problem solving solutions.

Highlights and Lesson Learned

We successfully employed One Health approach to assess risk factors of intestinal parasite infection in endemic area at the Thai-Myanmar border.

We mediated multi-sectorial collaboration and constituted a policy brief to notify Ministry of Interior and Ministry of Public Health for further strategic planning for reducing disease burden.

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Selected References

