Linking Waste Management and Health: A Community Health Impact Assessment Approach

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The Creation! that never had a day of rest

- In the beginning there was limited waste production. And man said it was Really Good. The 1st waste production and management.
- Then came industrial revolution and waste started to accumulate at industrial sites. But man said it was Good. The 2nd waste production and management.
- Then incomes increased, man bought lots of stuff, adding to industrial waste. But man said it was Good. The 3rd waste production and management.
- Then waste started driving man from homes and neighborhoods. And man said, hm... it is Not Good. The 4th waste production and management.
Then man said, now we need to make bins to collect waste. Man looked at the bins and said, it was Good. The 5th waste production and management.

Then man said, now that we have bins we need a helper for the bins. Incinerators, landfills and dumpsites were created. Man looked at this creation and said it was good. The 6th waste production and management.

But after all these creations, man Never Rested. Waste is being produced now more than ever before and continues to threaten human health if not properly managed.
Waste Management in Alaska

Waste Management in Alaska sets targets for increased prevention and reduction.

Waste reduction could be done through waste management techniques:

- **Source Reduction**: In-plant steps taken to reduce or eliminate waste generated by a process.
- **Recycling**: Reusing wastes as useful products in the process after they have been used by consumers.
- **Composting**: An aerobic, biological process of degradation of biodegradable organic matter.
- **Treatment**: Wastes are treated after they are generated to reduce their volume or toxicity.
- **Incineration**: A process of combustion designed to recover energy and reduce the volume of waste going to disposal.
- **Landfill**: The deposition of waste in a specially designated area.
- **Disposal**: Wastes are taken to a conventional disposal facility.
Waste Management and Health

- Waste management and public health are inextricably linked
- As such, there is inherent sense in assessing the potential impact on health of any proposed method of managing waste
- Such assessments can contribute to developing a greater understanding of the relationship between various forms of waste management and health
- Many studies have concentrated on the physical health outcomes, however a more holistic interpretation of health would also include psychological and social wellbeing
What Determines Our Health?

(Whitehead & Dahlgren, 1991)
Health Impact Assessment (HIA)

HIA is a combination of procedures, methods and decision making tools by which a policy, program or project may be judged:

- as to its potential effects on the health of a population
- the distribution of those effects within the population (health inequality).
- and it ensures that all groups within the population are considered, especially those identified as being vulnerable

HIA assist decision makers to mitigate the harmful impacts of a proposal and enhance the beneficial ones
Why Conduct Health Impact Assessment

To have a comprehensive overview of specific stages of a proposal so that actions associated with health impacts are considered.

Allow stakeholders, especially the community, to participate more meaningfully in the formation of a project, policy or program.

To enable the decision maker to be aware of both positive and negative health impacts and the size of an impact.
Why Conduct Health Impact Assessment

- To make the decision making process more transparent
- To extend the protection of human health and reduce the burden of ill health
- To promote greater equity in health

Documenting this evidence and making it freely available can assist in addressing public concern over potential health impacts.
Conducting HIA

- It may be conducted at various stages in the development of an identified project, program or policy:
  - *Prospective* HIA is carried out in the developmental stage when findings and recommendations can influence decision making.
  - *Concurrent* HIA is carried out when the identified proposal is being implemented.
  - *Retrospective* HIA is carried out after the proposal has been implemented.

- HIA is carried out by progressing through a series of steps which recognize the positive and negative health impacts.
Stages in Conducting HIA

Given the proposed subject area of waste management, a HIA could be conducted as follows:

S S C A R E

- Screening
- Scoping
- Appraisal
- Reporting
- Evaluation
The Health Impact Assessment Process (Stages and Methods)

**Screening**
- Is HIA required
  - Yes
  - No
  - Not Sure
- More information

**Scoping**
- What level of HIA is most appropriate
  - The Health Lens
  - Health Appraisal
- Scoping Checklist

**Appraisal**
- Use specific tools to
  - Assess Evidence
  - Establish Priority Impact
- Identify how to progress with policy, program or project

**Reporting & Recommendation**
- Recommend and justify options for action
- Evaluation of the impact of the HIA

**Evaluation**

Community Involvement in HIA Process

Group Exercise
These Materials at:

www.iser.uaa.alaska.edu

Thank You!
Rapid Community Health Impact Assessment: the case for Waste Management

In the matrixes that follow is a list of possible stakeholders that a possible waste management proposal (e.g. landfill) might affect, the determinants of health and potential impacts of the proposal and decision making process. Feel free to add to the list in any matrix while completing this exercise.

Stage I: Estimate Impact on key Stakeholders

For this particular landfill project think of its potential impact on all stakeholders in the table. You may add to the list of stakeholders.

Please circle/check the appropriate box in each row.

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Positive</th>
<th>Negative</th>
<th>Note key points raised in your discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children (6-12 years)</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
<tr>
<td>Adolescent (13-21 yrs)</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
<tr>
<td>Seniors</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
<tr>
<td>People with disability</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
<tr>
<td>Pregnant women</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
<td></td>
</tr>
</tbody>
</table>

Stage II: Identification of Key Determinants of Health

Which of the following determinants of health might be affected by the landfill, and will the impact be positive or negative?

Circle/check the appropriate box for each row

<table>
<thead>
<tr>
<th>Determinant of Health</th>
<th>Potential Impact</th>
<th>Note key points raised in your discussion and/or source of evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Lifestyle Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diet</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Physical activity</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Smoking</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Alcohol</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Social and Community Networks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Fear of crime</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
<tr>
<td>Lack of local</td>
<td>1 2 3 4 5</td>
<td>Not sure</td>
</tr>
</tbody>
</table>
Stage III: Assessing the confidence level of your work so far

How confident are you that you have enough information and knowledge to assess whether further health appraisal is needed? Please circle the response below which most closely reflects your opinion

<table>
<thead>
<tr>
<th>Response</th>
<th>Self-assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>We feel completely confident that we have had enough information and knowledge to feel confident with the estimations we have made</td>
</tr>
<tr>
<td>(b)</td>
<td>While there are some areas of uncertainty in the knowledge and information we have used, we feel confident enough with the estimations we have made</td>
</tr>
<tr>
<td>(c)</td>
<td>There are several uncertainties about the information and knowledge we have used and we need more information to be confident with the estimations we have made</td>
</tr>
</tbody>
</table>

If you answered (a) or (b) continue to stage IV

If you answered (c) stop now and consider what you need to do to gain the information and knowledge you require to continue. You may for instance, need to gather further information on:

1. The aims, objectives, and intended outcomes of the policy, program or project
2. The evidence relating to health impacts that might arise in relation to the policy, program or project
3. The results of HIA on similar policy, program or project
Stage IV: Summarize your findings: Do we need further health impact assessment?

Summarize your findings so far by answering the questions below.
For each question in the first column, check the appropriate box

<table>
<thead>
<tr>
<th>Question</th>
<th>Favor/not favor further appraisal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the landfill project affect, in a <strong>negative</strong> (4 and 5) way, any of the stakeholder groups?</td>
<td>YES  NO  Don’t know</td>
</tr>
<tr>
<td>For some of the determinants of health, are some of the effects of the landfill project unknown (not sure)?</td>
<td>YES  NO  Don’t know</td>
</tr>
<tr>
<td>Does the landfill project have any negative effects (4 or 5) through any of the determinants of health?</td>
<td>YES  NO  Don’t know</td>
</tr>
</tbody>
</table>

If you answered ‘Yes’ to two or more questions, then you favor further appraisal under the HIA process.
If you answered ‘No’ to two or more questions then you do not favor further appraisal under the HIA process.

**Circle/check the appropriate decision box**

| Favor further appraisal | Not favor further appraisal |

Stage V: The Decision Making: Where do we go from here?
Read the main options and courses of action summarized below. Which actions identified do you need to take? Check as appropriate

- **In favor of health impact assessment**, which should include community participation, time to influence the decision making process, explore resources available and who needs to be involved. You might also need to consider key points that have been noted while undertaking the screening of the waste management policy, program or project and identify how to progress.

- **Not favoring further health appraisal.** However, you might want to consider any key points that have been noted while undertaking the screening of the waste management policy, program or project and identify how to progress
  - Either because the potential health impact of implementing the waste management policy, program or project are judged to be negligible, that is neither positive nor negative
  - Or because the potential health impacts are judged to be well known, as are the ways in which negative impact can be eliminated or ameliorated, and/or positive impacts can be enhanced
Stage VI: Evaluating the HIA process

If you do not favor further appraisal, complete the following:

1. Record who was (were) responsible for screening the waste management policy, program or project and the documents that were used during the process.
2. Ensure that a completed copy of the screening is kept with the document along with any report and a completed HIA if carried out.
3. Outline how the impact of the waste management policy, program or project will be monitored and evaluated as it progresses.
4. Provide a cover page to the report, similar to the one below.

<table>
<thead>
<tr>
<th>Health Impact Assessment: Rapid Appraisal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of project: ..........................</td>
</tr>
<tr>
<td>Geographic area: ..................................</td>
</tr>
<tr>
<td>Name of Person/Group Reporting: ..............</td>
</tr>
</tbody>
</table>