Preventing HIV/AIDS in young people: a systematic review of the evidence from developing countries

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A partnership effort

World Health Organization

London School of Hygiene and Tropical Medicine

UNAIDS

UNFPA

UNICEF

And others!
Acknowledgements

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Objectives

- To inform the choices by policy makers and programme managers of interventions to reduce HIV in young people.

- To provide a comprehensive review of the evidence on the effectiveness of interventions to prevent HIV among young people in developing countries.

- To clarify what we mean by "evidence", and develop & use a standard methodology for reviewing different types of interventions in different settings:
  - Schools
  - Health services
  - Mass media
  - Geographically-defined communities
  - Young people most at risk
Background:
• Introduction & rationale
• Overview of HIV among young people
• Overview of HIV prevention interventions

Systematic Reviews:
• Methodology
• Reviews of interventions in:
  o Schools
  o Health services
  o Mass media
  o Geographically-defined communities
  o Young people most at risk of HIV

Conclusions and recommendations
Caveats

- This is not the final answer … a contribution to help us be clear about what we know & what we don't know at this point in time in terms of what works for HIV prevention among young people.

- Very variable evidence-base for different settings
  - Lack of evidence NOT same as evidence against effectiveness

- Reporting bias

- Did not review:
  - Structural interventions to decrease vulnerability (there is little evidence except from anecdote)
  - Interventions in the political environment (eg. policies, legislation)
  - All potential settings (eg. prisons/detention centres, churches, youth clubs, etc)
  - All groups at high risk of HIV
  - Care, support and treatment
Outcomes

- Based on UN General Assembly Special Session on HIV/AIDS (UNGASS) goals related to young people

Access to:
- Information
- Skills
- Services

Knowledge
Self-efficacy
Use of services

Reduce:
- Vulnerability

Few (if any) data on interventions to reduce vulnerability

HIV prevalence or incidence where available, but very few studies had data on this, but reported sexual behaviour used as an (imperfect) surrogate
Methodology

1. Select main settings where interventions provided for young people

2. Categorise interventions in each of these settings into types, based on the choices policy makers and programmes need to make

3. Assess the strength of evidence of effectiveness that would be needed to recommend each type of intervention for widespread implementation (the “evidence threshold needed”)

4. For each setting, assess the strength of the empirical evidence available for each type of intervention in terms of specific outcomes, grading the evidence using standard criteria. Review all studies where there was a clearly described intervention and evaluation of the impact on the UNGASS Goals outcomes
5. Decide if the evidence threshold needed to recommend widespread implementation for each type of intervention has been met?

- **Yes fully:** GO!
- **Partially:** Ready
- **No, but encouraging:** Steady
- **Evidence of lack of effectiveness or harm:** Do not go
Types of interventions

Example: Geographically-defined communities:

1. Targeting youth; delivered through existing Youth Service Organisation or Youth Centre
2. Targeting youth; delivered through new systems or structures
3. Community-wide; delivered through family networks
4. Community-wide; delivered through community activities
The strength of evidence needed to recommend widespread implementation of an intervention will vary.

This depends on:

- Feasibility (including cost)
- Potential for adverse outcomes
- Acceptability
- Potential size of the effect
- Other health or social benefits
**Strength of evidence needed**

**Example:**
*Interventions in geographically-defined communities working through pre-existing youth-serving organizations*

<table>
<thead>
<tr>
<th>Feasibility</th>
<th>Lack of potential for adverse outcomes</th>
<th>Acceptability</th>
<th>Potential size of effect</th>
<th>Other health or social benefits</th>
<th>Strength of evidence needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>+++</td>
<td>++</td>
<td>+++</td>
<td>++</td>
<td>++</td>
<td>Low</td>
</tr>
</tbody>
</table>

*Example: Interventions in geographically-defined communities working through pre-existing youth-serving organizations*
# Strength of evidence needed

**Example:**

Interventions in geographically-defined communities working through new structures or organizations

<table>
<thead>
<tr>
<th>Feasibility</th>
<th>Lack of potential for adverse outcomes</th>
<th>Acceptability</th>
<th>Potential size of effect</th>
<th>Other health or social benefits</th>
<th>Strength of evidence needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>High</td>
</tr>
</tbody>
</table>
A hierarchy of evidence

Informed judgement: Key informant interviews

“Adequacy/Supportive”: The expected changes occurred
(Before and after or time series studies without a control group)

“Plausibility”: The changes were greater than could be explained by any other external influences
(Control group included)

“Probability”: Changes were unlikely to have occurred by chance
(RCT)

Strength of evidence required to recommend widespread implementation

<table>
<thead>
<tr>
<th>Strength of evidence required</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Need positive evidence from well-conducted adequacy studies, and at least some positive evidence from plausibility studies</td>
</tr>
<tr>
<td>Medium</td>
<td>Need positive evidence from well-conducted plausibility studies, at a minimum</td>
</tr>
<tr>
<td>High</td>
<td>Need positive evidence from well conducted RCTs or quasi-experimental studies</td>
</tr>
</tbody>
</table>
## Recommendation for each type of intervention

<table>
<thead>
<tr>
<th>Category</th>
<th>Recommendation</th>
</tr>
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<tbody>
<tr>
<td>Go!</td>
<td>Evidence threshold met&lt;br&gt;&lt;span style=&quot;color: red;&quot; align=&quot;center&quot;&gt;Sufficient evidence to recommend widespread implementation on large scale now, with careful monitoring (coverage &amp; quality… &amp; cost)&lt;/span&gt;</td>
</tr>
<tr>
<td>Ready</td>
<td>Evidence threshold partially met&lt;br&gt;&lt;span style=&quot;color: orange;&quot; align=&quot;center&quot;&gt;Evidence suggests interventions are effective, but large-scale implementation must be accompanied by further evaluation to clarify impact and mechanisms&lt;/span&gt;</td>
</tr>
<tr>
<td>Steady</td>
<td>Some encouraging evidence of effectiveness but this evidence is still weak&lt;br&gt;&lt;span style=&quot;color: orange;&quot; align=&quot;center&quot;&gt;Evidence is promising, but further intervention development, pilot testing and evaluation urgently needed before they can move into the “ready” category&lt;/span&gt;</td>
</tr>
<tr>
<td>Do not go</td>
<td>Strong enough evidence of lack of effectiveness or of harm&lt;br&gt;&lt;span style=&quot;color: red;&quot; align=&quot;center&quot;&gt;Not the way to go …&lt;/span&gt;</td>
</tr>
</tbody>
</table>
Results
### “GO!”

<table>
<thead>
<tr>
<th>Schools</th>
<th>Curriculum-based sexual health education with specific characteristics found to be effective in high-income countries, led by adults (±/- peer involvement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health services</td>
<td>Interventions with service providers including changes in structure or function of facilities &amp; promotion of the services among young people and gatekeepers in the community</td>
</tr>
<tr>
<td>Mass media</td>
<td>Messages delivered through radio &amp; other media (eg. print), with or without TV</td>
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</table>
“Ready”

<table>
<thead>
<tr>
<th>Geographically-defined communities</th>
<th>Interventions targeting young people using existing youth-service organisations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young people most at risk</td>
<td>Interventions that provide information and services both through facilities and outreach</td>
</tr>
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Implications for Action

- There are types of intervention with strong enough evidence to advocate widespread, large-scale implementation now (Go!), & others where large-scale implementation is justified with careful impact evaluation (Ready)

- There is a clear research agenda: moving “Steady” interventions to “Ready” or “Do Not Go”, and “Ready” to “Go!”
Conclusion

We have:

- Goals and targets
- Increasing funds in countries
- Increasing clarity about effective and promising interventions

We need:

- No more excuses that “We don’t have any evidence for prevention among young people”
- Much more evidence-informed action!
- More, careful evaluations of Steady & Ready interventions