Assessing the potential of provider-initiated HIV counseling and testing at health care settings in Thailand

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Outline

- Rationale and objectives
- Methods
- Results
- Discussion
Rationale

- Early detection for unknown HIV infection
  - Individual: to provide proper care, e.g. prophylaxis of opportunistic infections, antiretroviral treatment
  - Population: to prevent horizontal and/or vertical HIV transmission

- Provider-initiated voluntary HIV counselling testing (VCT) -- no enough evidence on its effectiveness, value for money and policy dimension
Study objectives

To assess

- Effectiveness
- Efficiency (value for money)
- Policy dimension

of introducing provider-initiated VCT compared to conventional VCT at community hospitals in Thailand
Approaches

- **Effectiveness**
  - Cluster (pair-matched) randomised study → acceptance rate of HIV testing and HIV infection detection rate

- **Efficiency**
  - Economic evaluation (cost-effectiveness analysis)

- **Policy dimension**
  - Qualitative policy analysis at local and national levels
Scope of the study

- Settings: community hospitals with low and high HIV prevalence
- Target population: 13-64 year-old visiting OPD
- Intervention:
  - Information sheet
  - 7-minute VDO for group counselling
  - Anonymous system for HIV testing
I. Providing invitation cards at reception desks
II: Pretest group counseling using TV programme at OPDs
III: giving inform consent and drawing blood
IV: providing individual post-test counseling
*there were high- and low- HIV prevalence strata.
Outcomes

- **Experimental study**
  - Acceptance rate of HIV testing (per eligible population)
  - Detection rate of new HIV infections (per eligible population)

- **Economic evaluation**
  - Trial-based = $ per HIV infection detected
  - Model based=> $ per HIV infection averted

- **Policy analysis**
  - Political acceptability
  - Potential barriers/concerns regarding the introduction of PICT
Results
Acceptance rate of HIV testing

- 50 times higher rate of HIV tests were observed in the study cluster
- The lower HIV prevalence area gained more benefit
- The likelihood of an individual to take a HIV test was 24 times higher in the study group
- Factor affecting the willingness to take the test: Blue collar workers, individuals with extra-marital sex, perception of risk from his/her spouse, with history of alcohol drinking, not using condom with other partners
Detection rate of new HIV infections

- 13 times higher rate of HIV detection were observed in the study cluster
- The higher HIV prevalence area gained more benefit
- Given CD4 counts, early detection of HIV infection among those expose to the intervention was observed
# Results of economic evaluation

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<thead>
<tr>
<th></th>
<th>Including protocol inducted costs</th>
<th>Excluding protocol inducted costs</th>
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<tbody>
<tr>
<td>Costs</td>
<td></td>
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<tr>
<td>Experimental clusters</td>
<td>104,158</td>
<td>69,928</td>
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<tr>
<td>Control clusters</td>
<td>39,795</td>
<td>20,235</td>
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<tr>
<td>HIV cases detected</td>
<td></td>
<td></td>
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<tr>
<td>Experimental clusters</td>
<td>21</td>
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<tr>
<td>Control clusters</td>
<td>9</td>
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<tr>
<td>HIV infections averted</td>
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<tr>
<td>Experimental clusters</td>
<td>1.86</td>
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<tr>
<td>Control clusters</td>
<td>0.12</td>
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<tr>
<td>Incremental cost</td>
<td>64,363</td>
<td>49,693</td>
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<tr>
<td>Incremental outcomes</td>
<td></td>
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<tr>
<td>HIV cases detected</td>
<td>12</td>
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<tr>
<td>HIV infections averted</td>
<td>1.74</td>
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<tr>
<td>ICER (PPP USD per HIV case detected)</td>
<td>5,364</td>
<td>4,141</td>
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<tr>
<td>ICER (PPP USD per HIV infection averted)</td>
<td>36,979</td>
<td>28,551</td>
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PPP USD = international US dollar  
ICER = Incremental cost-effectiveness ratio
Cost-effectiveness acceptability curves

The current threshold in Thailand

Program cost excluding protocol induced cost
Program cost including protocol induced cost

Probability of intervention being cost-effective

Value of ceiling threshold per one HIV infection averted ($PPP)
Results of sensitivity analysis

![Graph showing the relationship between PPP USD per HIV case averted and HIV prevalence (%) for different acceptance rates. The graph has a y-axis labeled 'PPP USD per HIV case averted' ranging from 0 to 100,000 and an x-axis labeled 'HIV prevalence (%)' ranging from 0.05 to 30. The acceptance rates are represented by different line styles: 3% (dotted line), 5% (dashed line), 10% (dashed-dotted line), 20% (solid line), and 50% (gray line).]
Policy analysis

- Stakeholders shared common agreement on the potential benefits i.e. improving care for HIV/AIDS patients and preventing further HIV infections.
- Providers concerned the increase of workload and difficulties to integrate the intervention into routine delivery practice and its value for money.
Discussion

- **Q:** Does provider initiated VCT increase the acceptance rate of HIV testing and detection rate of HIV infection?
- **A:** Yes, it significantly increased the acceptance rate and HIV detection rate
Q: Who are likely to take the HIV test?
A: Those with higher HIV risk behaviours, e.g. having extra marital sex, not using condom, and perceiving that his/her spouse was at risk, are more likely to take the test than those with lower HIV risk behaviours.
Q: Whether provider-initiated VCT offers good value for money?

A: Yes, it is cost-effective under the Thai context, and also likely to be cost-effective at other settings where HIV prevalence higher than 5% or with the acceptance rate of 10% or greater.
Q: Is this initiative of interest among policy makers in Thailand?

A: Yes, it is currently implemented in the Greater Bangkok area and under consideration to scale up as a nation-wide programme in Thailand.
Q: Can this intervention be implemented in other countries?

A: Yes, if

1. Adequate infrastructure and workforces for counselling and HIV testing
2. Availability of continuum of care e.g. prevention options, opportunistic infection prophylaxis, antiretroviral treatment for patients and their families.
3. Political/community support
Q: what should be concerned if this intervention to be adopted?

A: there are some issues

- Ensure quality of pre- and post-test counselling
- Ensure confidentiality of the process and HIV test results
- Acceptance to obtain this intervention have to be on a voluntary basis
Acknowledgement

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