The effect of integrated intervention for service providers on partner notification and STD/HIV related consulting services in public STD clinics, Shanghai, China

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INTRODUCTION

• Sexually transmitted diseases (STDs)
  • Infections that can be transferred through any type of sexual contact (vaginal, anal, oral…)
  • More than 30 different sexually transmissible bacteria, viruses and parasites
    • common(8) : gonorrhoea, chlamydial infection, syphilis, trichomoniasis, chancroid, genital herpes, genital warts, human immunodeficiency virus (HIV) infection, hepatitis B infection.
• Estimated new cases of curable sexually transmitted infections (gonorrhoea, chlamydia, syphilis and trichomoniasis) by WHO region, 2008

http://www.who.int/mediacentre/factsheets/fs110/en/
• A major public problem in developing countries like China
  – High incidence & increasing trend

<table>
<thead>
<tr>
<th>Year</th>
<th>Syphilis</th>
<th>Gonorrhoea</th>
<th>Aids</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>12022↑↑</td>
<td>8385</td>
<td>85↑↑</td>
</tr>
<tr>
<td>2007</td>
<td>10674</td>
<td>10152</td>
<td>53</td>
</tr>
</tbody>
</table>
– Disease & economic burden
  • inflammatory disease
  • ectopic pregnancy
  • infertility
  • fetal and neonatal morbidity and mortality
  • facilitate the sexual transmission of HIV
  • economic loss: account for 17%
• The service of STD clinics
  – Focus on treatment rather than prevention
    • over-treatment
  – Ignore behavioral intervention
    • the service rate of partner notification: 29%~48%
    • condom promotion: 26%~33%

• Counseling and behavioral interventions offer primary prevention against STIs (including HIV), as well as against unintended pregnancies.

—WHO

october 28, 2014
• Previous research
  – Pay attention to cross-sectional survey
  – Lack of integrated intervention

• The aim of this study was to evaluate the effect of integrated intervention on partner notification and STD/HIV consulting services in public STD clinics, Shanghai, China.
MATERIALS & METHODS

• Study Field
  – Three levels of STDs care net-work (Shanghai)
    • municipal clinic, district clinic and community clinic
  – Two representative clinic respectively in each level
  – Six public STD clinics were selected, and randomly allocated into the intervention group (IG) and the control group (CG)
• The criteria of clients for recruitment
  – Older than 15 years old
  – Visiting the selected clinics for the first time and requiring for STDs-related service
  – Willing to participate in the research.
• **Study design**

  — An intervention research

• The intervention group: a series of intervention measures were implemented for the service providers (6 months)
  
  — Qualified advocacy and mobilization, IEC related services, training, supervising, following up and integrated counseling, partner notification and condom promotion

• The control group: routine work
• **Data collection**
  – Interception investigation
  – After 3 months of the integrated intervention
  – Using questionnaire
    • social demography
    • sexual behavior
    • symptom feature
    • content and availability of service
    • knowledge related to STDs/AIDS
    • ……

October 28, 2014
• **Statistical analysis**
  
  – Data entry: Epidata 3.0 (The EpiData Association, Odense Denmark)
  

  • Descriptive analysis
  
  • Logistic regression analysis
  
  • Statistical significance defined as P<0.05.
• This study was approved by the Ethics Committee of Shanghai Institute of Planned Parenthood Research
RESULTS

- **Basic information**

<table>
<thead>
<tr>
<th></th>
<th>IG</th>
<th>CG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-intervention</td>
<td>412</td>
<td>448</td>
</tr>
<tr>
<td>Post-intervention</td>
<td>451</td>
<td>418</td>
</tr>
</tbody>
</table>

- Related to characteristics (age, gender, marriage status, etc.), there is no significant difference between groups.
# The situation of partner notification

## IG

<table>
<thead>
<tr>
<th>Category</th>
<th>PRE (n=412)</th>
<th>POST (n=451)</th>
<th>CG</th>
<th>PRE (n=448)</th>
<th>POST (n=418)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>Requirements of informing sexual partners condition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>276</td>
<td>66.99</td>
<td>397</td>
<td>88.03</td>
<td>272</td>
</tr>
<tr>
<td>no</td>
<td>136</td>
<td>33.01</td>
<td>54</td>
<td>11.97</td>
<td>176</td>
</tr>
<tr>
<td><strong>Proposing partner check/treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>302</td>
<td>73.30</td>
<td>402</td>
<td>89.14</td>
<td>344</td>
</tr>
<tr>
<td>no</td>
<td>110</td>
<td>26.70</td>
<td>49</td>
<td>10.87</td>
<td>104</td>
</tr>
<tr>
<td><strong>Informing the reasons for this condition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>82</td>
<td>19.90</td>
<td>303</td>
<td>67.18</td>
<td>81</td>
</tr>
<tr>
<td>no</td>
<td>330</td>
<td>80.10</td>
<td>148</td>
<td>32.82</td>
<td>367</td>
</tr>
<tr>
<td><strong>Providing contact card</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>60</td>
<td>14.56</td>
<td>142</td>
<td>31.49</td>
<td>37</td>
</tr>
<tr>
<td>no</td>
<td>352</td>
<td>85.44</td>
<td>309</td>
<td>68.51</td>
<td>411</td>
</tr>
</tbody>
</table>
Control gender, age, group and time, integrated intervention has improved the partner notification service (P < 0.0001).
The influence factors analysis of partner notification
(Logistic regression, n=1729)

<table>
<thead>
<tr>
<th>Variables</th>
<th>β</th>
<th>OR</th>
<th>95% CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group : IG/CG</td>
<td>0.1614</td>
<td>1.175</td>
<td>0.924-1.494</td>
<td>0.1877</td>
</tr>
<tr>
<td>Time: post/pre</td>
<td>0.2032</td>
<td>1.225</td>
<td>0.963-1.559</td>
<td>0.0986</td>
</tr>
<tr>
<td>group*time</td>
<td>1.6935</td>
<td>5.438</td>
<td>3.825-7.732</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Controlling gender and age
## The situation of counseling service

<table>
<thead>
<tr>
<th>Category</th>
<th>IG</th>
<th>CG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRE (n=412)</td>
<td>POST (n=451)</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>222</td>
<td>53.88</td>
</tr>
<tr>
<td>no</td>
<td>190</td>
<td>46.12</td>
</tr>
<tr>
<td>providing further counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>142</td>
<td>63.96</td>
</tr>
<tr>
<td>no</td>
<td>80</td>
<td>36.04</td>
</tr>
<tr>
<td>suggestion for HIV testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>212</td>
<td>51.46</td>
</tr>
<tr>
<td>no</td>
<td>200</td>
<td>48.54</td>
</tr>
<tr>
<td>telling the place of HIV testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>224</td>
<td>54.37</td>
</tr>
<tr>
<td>no</td>
<td>188</td>
<td>45.63</td>
</tr>
</tbody>
</table>
The score of counseling

PRE VS. POST:
IG: P < 0.0001
(Z = -5.61)
CG: P = 0.9674

IG VS. CG:
PRE: P = 0.9278
POST: P < 0.0001
(Z = -6.59)

Control gender, age, group and time, integrated intervention has significant influence on the counseling service. (P < 0.0001).
The influence factors analysis of counseling service
（Logistic regression， n=1729）

<table>
<thead>
<tr>
<th>Variables</th>
<th>β</th>
<th>OR</th>
<th>95%CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group: IG/CG</td>
<td>-0.00612</td>
<td>0.994</td>
<td>0.784-1.259</td>
<td>0.9596</td>
</tr>
<tr>
<td>Time: post/pre</td>
<td>0.0121</td>
<td>1.012</td>
<td>0.798-1.283</td>
<td>0.9208</td>
</tr>
<tr>
<td>group*time</td>
<td>0.7596</td>
<td>2.137</td>
<td>1.526-2.995</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Controlling gender and age
DISCUSSION

• PARTNER NOTIFICATION (PN) has been a cornerstone of STD control efforts in the United States since the 1940s, when Surgeon General Thomas Parran promoted the practice as a syphilis case-finding tool.

———Parran T.
• In our study
  – PN services provided to only a very small minority of persons
  – The way of PN services is poor (only by patient)
  – The content is too simple, little emphasis on reason of partner notification
  – Notification card is rarely used
    • The rate of notification card using: 14.56% → 31.49% (Post-intervention)
• Informed choice and counseling are the essential elements of QoC
• Counseling is the key safeguard of informed choice
• Counseling is also important to patient from STD clinics.
• **In our study**

  – Consulting services is limited to general need, rather than further need;
  – Lack of interaction and consulting skills;
  – Misunderstanding of STD by service provider

  • The rate of counseling service: below 80% (post-intervention)
CONCLUSIONS

Integrated intervention for service providers and managers can improve significantly the provision of partner notification and STD/HIV related consulting services in public STD clinics.
ACKNOWLEDGE

• Financial supports from World Health Organization (WHO, A65078)

• All contributors, including interviewers, the staff from clinics, and postgraduate students, who participated in the survey, data checking or data management.
Thanks for listening
Welcome to Shanghai!