RESPONDING TO CHILDREN AND ADOLESCENTS WHO HAVE BEEN SEXUALLY ABUSED

WHO CLINICAL GUIDELINES*

Web Annex 4a: Sexually Transmitted Infections prophylaxis: evidence-to-decision table

*Full guide: https://apps.who.int/iris/bitstream/handle/10665/259270/9789241550147-eng.pdf
Web annex 4a. Evidence-to-decision table: post-exposure prophylaxis for curable and vaccine preventable sexually transmitted infections (STIs)

Recommendations 6 and 7

**Question** – Among children and adolescents (0–18 years) who have or may have been exposed to sexual abuse (P) is screening and treatment for STIs (I) more effective than presumptive treatment for STIs (C) in order to prevent and manage the adverse outcomes of STIs (O)?

Table 1. Summary of the assessments based on which a decision was made

<table>
<thead>
<tr>
<th>Problem</th>
<th>Factors considered in formulating recommendation</th>
<th>Judgement</th>
<th>Research evidence</th>
</tr>
</thead>
</table>
|         | □ No | □ Probably no | □ Probably yes | ☒ Yes | □ Varies | □ Don’t know | 1. The search did not provide any evidence about the main PICO (population, intervention, comparator, outcome) research question. ⇒ There were no studies/reports directly comparing the effectiveness, acceptability or preference for either intervention.  
2. The problem has considerable public health importance (see full report, pp. 4–5, 11–14):  ⇒ Child sexual assault (CSA) is common.  ⇒ Children who have been sexually abused rarely present to services. ○ In most countries surveyed in the US Centers for Disease Control and Prevention (CDC) study, the proportion of victims that received services, including health and child protective services, was ≤ 10.0%.  ⇒ Children and adolescents who are sexually abused are at risk of acquiring STIs.  ⇒ Untreated STIs will lead to complications.  ⇒ If the assailant is infected, the risk of transmission is high for contact sexual abuse (see full report, sections 2.3 and 2.4, pp. 17–18).  ⇒ STIs are very frequently asymptomatic. |
<table>
<thead>
<tr>
<th>Factors considered in formulating recommendation</th>
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<th>Research evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Values</strong></td>
<td><strong>☐ Important uncertainty or variability</strong></td>
<td><strong>1. The outcomes are:</strong></td>
</tr>
<tr>
<td>Is there important uncertainty about or variability in how much people value the main outcomes?</td>
<td><strong>☐</strong> Possibly important uncertainty or variability</td>
<td>⇒ reduction in consequences of STIs: pain, pelvic inflammatory disease, transmission, fertility, HIV risk (main outcome);</td>
</tr>
<tr>
<td></td>
<td><strong>☐</strong> Probably no important uncertainty or variability</td>
<td>⇒ number of children receiving treatment (e.g. loss to follow-up);</td>
</tr>
<tr>
<td></td>
<td><strong>☐</strong> No important uncertainty or variability</td>
<td>⇒ negative effects of the screen and test or presumptive treatment;</td>
</tr>
<tr>
<td></td>
<td><strong>☐ No known undesirable outcome</strong></td>
<td>⇒ adverse effects of treatment of individual: adverse effects of antibiotics;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>⇒ adverse effects of population level screen and treat or presumptive treatment (e.g. resistance).</td>
</tr>
<tr>
<td><strong>Desirable effects (Benefits)</strong></td>
<td><strong>☐ Trivial</strong></td>
<td><strong>2. The relative importance or values of the main outcomes of interest are unknown.</strong></td>
</tr>
<tr>
<td>How substantial are the desirable anticipated effects of screening and treatment over presumptive treatment?</td>
<td><strong>☐ Small</strong></td>
<td>⇒ No studies directly measure values and preferences among children or their guardians regarding presumptive or laboratory-supported STI treatment.</td>
</tr>
<tr>
<td></td>
<td><strong>☐ Moderate</strong></td>
<td>⇒ Other negative outcomes of CSA and the decision for immediate or deferred treatment (i.e. after screening) include the psychological trauma linked to the assault; the fear, shame or guilt of having an STI; and anxiety about future health and fertility.</td>
</tr>
<tr>
<td></td>
<td><strong>☐ Large</strong></td>
<td>⇒ Proving or disproving the presence of an STI may have both negative and positive consequences.</td>
</tr>
<tr>
<td></td>
<td><strong>☐ Varies</strong></td>
<td>⇒ The immediate relief provided by treatment should alleviate uncertainty about having an STI and future health.</td>
</tr>
<tr>
<td></td>
<td><strong>☒ Don’t know</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Summary of findings**

1. The review did not find direct evidence of the effects (desirable or undesirable) of immediate presumptive treatment (comparison) versus deferred treatment following laboratory evidence of an STI (i.e. screening (intervention)).
2. Desirable effects (benefits) of screening and treatment (i.e. intervention) are:
   ⇒ adequate diagnosis and potentially reduced overtreatment;
   ⇒ fewer numbers of patients with undesirable effects of treatment including adverse reactions to treatment and the use of multiple drugs (with Emergency
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<tr>
<td>Contraception and HIV PEP). 3. On the other hand, the benefits of presumptive treatment (i.e. comparison) are: ⇒ reduction in complications resulting from untreated STIs; ⇒ synergy in preventing HIV transmission; ⇒ overcoming challenges of late presentation of the survivor after assault and low follow-up rates for screening and treatment.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Undesirable effects (Harms)

<table>
<thead>
<tr>
<th>How substantial are the undesirable anticipated effects of screening and treatment compared to presumptive treatment?</th>
<th>Large</th>
<th>Moderate</th>
<th>Small</th>
<th>Trivial</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Varies</td>
<td>☒ Don’t know</td>
<td></td>
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</tbody>
</table>

**Summary of findings**

Potential harms of screening and treatment (i.e. intervention) are linked to:

1. High loss to follow up and late presentation of survivor to facilities for treatment.
   ⇒ Studies from Brazil, the Democratic Republic of the Congo, South Africa, Thailand and Uganda (1–5) showed that, except in Brazil, approximately half or less than half of the survivors of sexual abuse presented to facilities within the 72 hours required for HIV PEP treatment.
   ⇒ Follow-up visit rates after the initial visit are 10–80% of clients (see full report, section 2.5, pp. 18–21).
2. Those who do not return for follow-up visits might delay or miss treatment, potentially leading to complications.
3. Sample collection may have psychological implications, and unnecessary anxiety may arise in people waiting for test results.
4. Potential harms of presumptive treatment (i.e. comparison) are linked to:
   ⇒ adverse effects of antibiotics from presumptive treatment interacting with emergency contraception and HIV PEP;
   ⇒ overtreatment;
   ⇒ promotion of resistance for gut pathogens.

### Certainty of evidence

<table>
<thead>
<tr>
<th>What is the overall certainty of the evidence of effects?</th>
<th>Very low</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ Very low</td>
<td></td>
<td></td>
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</table>

1. There is no direct evidence to support the decision in the form of randomized trials, so the quality of evidence was rated very low, based on the indirectness of the evidence.
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</thead>
<tbody>
<tr>
<td>No included studies</td>
<td></td>
<td></td>
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</tbody>
</table>

**Balance of effects**

Does the balance between desirable and undesirable effects favour the intervention or the comparison?

- [☐] No
- [☐] Favours the comparison
- [☒] Probably favours the comparison
- [☐] Does not favour either the intervention or the comparison
- [☒] Probably favours the intervention
- [☐] Favours the intervention

1. The balance of harms and benefits probably favours the comparison (i.e. presumptive treatment) over the intervention (i.e. screening and treatment).

**Resources required**

How large are the resource requirements (costs) for screening and treatment?

- [☒] Large costs
- [☐] Moderate costs
- [☐] Negligible costs and savings
- [☐] Moderate savings
- [☐] Large savings

- [☐] Varies
- [☐] Don’t know

Greater resources are required for screening and treatment for gonorrhoea and chlamydia.  
1. Costs of STI screening based on nucleic acid amplification testing (NAAT) for gonorrhoea and chlamydia is up to US$ 30 per pathogen and for syphilis is $ 0.13 to 1.75 (Rapid Plasma Reagin - RPR).  
2. Thus, except for syphilis, the costs per patient of screening and treatment are higher than those presumptive treatment.  
3. Use of RPR for syphilis, where available, will reduce the use of antibiotics.

**Certainty of evidence of required resources**

What is the certainty of the evidence of resource?

- [☐] Very low
- [☐] Low
- [☐] Moderate
- [☐] High

No direct evidence from the studies included.
<table>
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| requirements (costs)?                           | ☒ No included studies | No studies evaluated the cost–effectiveness of either intervention. Nevertheless, given the high costs per patient of screening with NAAT for gonorrhoea and chlamydia:  
  ➔ presumptive treatment is more cost-effective;  
  ➔ for symptomatic cases, syndromic management is cost-effective. |
| Cost–effectiveness                               |           |                  |
| Does the cost–effectiveness of the intervention favour the intervention or the comparison? | ☐ Favours the comparison  
  ✔ Probably favours the comparison  
  ☐ Does not favour either the intervention or the comparison  
  ☐ Probably favours the intervention  
  ☐ Favours the intervention  
  ☐ Varies  
  ☐ No included studies | |
| Equity and human rights                         |           |                  |
| What would be the impact on health equity?      | ☐ Reduced  
  ✔ Probably reduced  
  ☐ Probably no impact  
  ☐ Probably increased  
  ☐ Increased  
  ☐ Varies  
  ☐ Don’t know | 1. No studies evaluated issues related to equity.  
  2. Nevertheless, given the high costs of screening and treatment and low rates of return of survivors for follow up, equity in access and uptake would likely be reduced for the screening and treatment option (i.e. intervention). |
| Acceptability                                   | ☐ No  
  ☐ Probably no  
  ☐ Probably yes for clinician/referral source | Acceptability of screening and treatment is unknown.  
  ➔ Only 2 studies assessed issues related to acceptability; they found high acceptability of presumptive treatment in older children. |
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<td></td>
<td></td>
</tr>
<tr>
<td>☐ Varies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☒ Don’t know</td>
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<tr>
<td>Feasibility</td>
<td></td>
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</tr>
<tr>
<td>Is the intervention feasible to implement?</td>
<td>☐ No</td>
<td>The intervention – i.e. screening and treatment – is not feasible to implement in low-resource settings, where tests for certain STIs – e.g. gonorrhoea and chlamydia – are not always available or affordable and returning for treatment may not be feasible for some patients.</td>
</tr>
<tr>
<td>☒ Probably no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Probably yes</td>
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Recommendations 6 and 7

**Question** – Among children and adolescents (0–18 years) who have or may have been exposed to sexual abuse (P) is screening and treatment for STIs (I) more effective than presumptive treatment for STIs (C) in order to prevent and manage the adverse outcomes of STIs (O)?

<table>
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<th>Content</th>
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<tr>
<td><strong>Type of recommendation</strong></td>
<td>Strong recommendation against the intervention</td>
</tr>
</tbody>
</table>
| Recommendations | R 6. Presumptive (or prophylactic) treatment for gonorrhoea, chlamydia and syphilis is suggested for children and adolescents who have been sexually abused involving any oral, genital or anal contact, particularly in settings where laboratory testing is not feasible (conditional/strong recommendation, very low quality – based on indirect evidence).

R 7. For children and adolescents who have been sexually abused involving any oral, genital or anal contact and who present with clinical symptoms, syndromic case management is suggested for vaginal/urethral discharge (gonorrhoea, chlamydia, trichomoniasis), and for genital ulcers (herpes simplex virus, syphilis and chancroid) in line with WHO or national guidelines (conditional/strong recommendation, very low quality – based on indirect evidence).

R 8 and R 9. If the child is unvaccinated for human papillomavirus (HPV) or hepatitis B virus (HBV), offer HPV and HBV vaccination, as per national guidelines – cross-reference to existing HBV and HPV recommendations.

**Justification**

Because of the lack of direct evidence, the Guideline Development Group (GDG) considered the indirect evidence summarized above. They noted that there is important uncertainty about the evidence as there are no studies comparing the test-and-treat-approach to presumptive treatment. Nevertheless, the indirect evidence points to the following.

⇒ Despite the heterogeneous evidence on STI detection rates among sexually abused children and adolescents across
## Conclusions

regions, high rates of some types of STIs have been observed in this population in some settings.

- STIs are very frequently asymptomatic and can lead to serious complications when untreated.
- Most survivors/victims of sexual abuse do not present within the first 3–5 days, and those who do often do not return for follow-up visits, so the opportunity to treat for STIs needs to be maximized in the first visit.
- While the undesirable effects of presumptive treatment include potential side effects, particularly when combined with PEP and emergency contraception, and the potential for development of resistance for gut pathogens, the side effects of STI drugs may be short-lived, and the use of a single supervised dose can minimize the potential for pathogen resistance.
- The costs of presumptive treatment are far lower than those of screening and treatment, which require NAAT to be available and accessible. The GDG extensively debated the issue of cost and availability, as it did not want to have different standards of care for different resource settings. It also highlighted that screening for syphilis is available and affordable, and should ideally be done.
- In chronic cases of abuse with no particular symptoms, screening (through laboratory testing) may be warranted, particularly for specific STIs that are long lasting/chronic and may require serological testing. These STIs are usually the ones for which testing is more feasible and available, such as syphilis and hepatitis. Testing is, accompanied by some follow-up for treatment. As much as can be done, should be done at point of contact.
- In the presence of clinical symptoms (e.g. genital ulcer syndrome, genital discharge syndrome or the presence of anogenital warts), presumptive treatment, in the form of the syndromic approach, would be the more obvious course of action, no matter whether samples can also be collected for confirmation of diagnosis or for forensic purposes.

### Subgroup considerations

1. Evidence suggests that gonorrhoea detection was higher in female sexual-assault survivors and syphilis detection more common in boys exposed to sexual assault. But, the available data is largely biased by the selection criteria of population to be tested and the choice of tests in the different studies. Very few studies screened for every STI and in some studies, asymptomatic patients were not screened.
2. Higher rates of gonorrhoea and syphilis were detected in children < 10 years than those > 10 years.

### Implementation

1. Where feasible, health care providers should collect specimens for either confirmation of diagnosis or forensic use
2. Where rapid, point-of-care tests (POCTs) for syphilis are available, health care providers should test for syphilis. If the test
<table>
<thead>
<tr>
<th>Conclusions</th>
<th>Content</th>
</tr>
</thead>
</table>
| considerations | results are positive, treatment should be offered even though confirmation may still be needed. If test results are negative and presumptive treatment is not offered, however, tests should be repeated after four weeks as per WHO syphilis guidelines.  
3. Efforts are under way to develop POCTs for other STIs that will augment syndromic management of symptomatic cases and increase the ability to identify asymptomatic infections.  
4. The drug regimens and dosage for syndromic case management and presumptive STI treatment should be based on national guidelines.  
5. More information is available in the WHO guidelines on gonorrhoea, chlamydia, syphilis and herpes simplex virus (2016) (6–9). |

As to equity and human-rights considerations, no studies evaluated issues related to equity. Nevertheless, the GDG noted that requiring laboratory tests for gonorrhoea and chlamydia (i.e. NAATs) in order to offer treatment would limit access (e.g. in settings where such tests were not available or accessible for some groups) and requiring children or adolescents to return for results in order to obtain treatment might lower uptake, as studies included in the review suggested a high loss to follow-up of survivors in subsequent visits. On the other hand, in situations of ongoing abuse and/or where laboratory testing is feasible, it may be important to test before offering treatment.

References


