

Supplement 1. Data extraction form

I. CLASSIFICATION INFORMATION

General Study Information

1. Title	
2. Author(s)	
3. Journal	
4. Year	
5. Date form updated (mm/dd/yyyy)	
6. Name of Reviewer #1	
7. Name of Reviewer #2	
Notes:	

8. Study Design

8.1 Analytic Method

☐ Cost-Effectiveness Analysis (CEA)

☐ Cost-Utility Analysis (CUA)

8.2 Summary Measure(s)

☐ Dollars per Case or Injury Averted

☐ Dollars per Person Reached by Intervention

☐ Dollars per Life Saved

☐ Dollars per Life Year (LY) Saved

☐ Other (*Specify*)

☐ Dollars per Quality-Adjusted Life Year (QALY)

☐ Dollars per Disability-Adjusted Life Year (DALY)

☐ Dollars per Healthy-Year Equivalent (HYE)

☐ Cost-Benefit Analysis (CBA)

☐ Other (Specify)

☐ Net-Benefits (NB) or Net Present Value (NPV)

☐ Benefit/Cost (B/C) Ratio

☐ Other (Specify)

☐ Cost Analysis (CA)

☐ Dollars

☐ Dollars per Unit of Service Rendered

☐ Other (Specify)

II. INTERVENTION DESCRIPTION

(Please refer to Community Guide's Econ Abstraction p.6 for instructions)

9. Intervention Description:

10. Study Aim

11. Infection(s):

- ☐ Chlamydia
- ☐ Gonorrhea
- ☐ Syphilis
- ☐ Other:

12. Description of the Study Population:

13. Age Range(s) of Study Population:

14. Other Characteristics of Study Population Potentially Important to the Effectiveness of the Intervention (optional- focus on something you might want to flag in the discussion section to identify differences across studies, e.g., “jail population”; don’t “overthink” this and okay to copy/paste a larger piece of text rather than condense) *(Specify)*

15. Comparator

☐ Status Quo *(Specify)*

☐ No Program *(Specify)*

☐ Other *(Specify)*

☒ No Comparator ☐ Cannot Determine ☐ Does Not Apply

If “cannot determine,” explain what is unclear:

16. Other Interventions Included in the Analysis

III. STUDY INFORMATION

Framing of the Study

17. Setting *(Check all that apply)*

- | | | |
|---|---|---------------------------------|
| ☐ Hospital | ☐ Mental Health Setting | ☐ Home |
| ☐ Clinic or Healthcare Provider Office | ☐ Community-Based Organization | ☐ Prison |

- | | | |
|--|--|----------------------------------|
| ☐ Nursing Home | ☐ School | ☐ Street |
| ☐ Child Care Center | ☐ Workplace | ☐ Shelter |
| ☐ Drug Treatment Facility | ☐ Religious Institution | |
| ☐ Community-wide (<i>Specify</i>) | | |

- ☐ Other Setting(s) (*Specify*)

- ☐ Cannot Determine (*specify what's difficult to determine*)

- ☐ Does Not Apply

18. Geographical Location (county and/or state)

19. Perspective(s)

- ☐ Societal
- ☐ Patient and Patient Family
- ☐ Healthcare Provider
- ☐ Health Maintenance Organization (HMO)
- ☐ Non-HMO
- ☐ Self-insured Employer
- ☐ Public Health Agency Program

☐ Federal ☐ State ☐ Local

(Specify)

☐

Other Governmental Department/Organization Program

☐ Federal ☐ State ☐ Local

(Specify)

☐ Other Perspective(s) *(Specify)*

☐

Cannot Determine *(specify what makes this hard to determine, e.g., there is conflicting information or it was not stated)*

☐

Does Not Apply

20. Study time period *(add "Cannot Determine" if time period not stated):*

21. Cost Data Types

List what cost types that are included as stated by the authors.

22. Cost Data Sources

List what cost data sources that are included as stated by the authors.

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23. Summary Measure(s)

Add rows as needed. If you are unsure what to include, err on the side of including more – in a future step, we can work with CDC coauthors to identify what we will put in the manuscript.

Summary measure	Value of Summary Measure (CUA or CEA Ratio, Net Benefits or Net Present Value, OR Costs)	Identified from study or recalculated?	Location (specify page and table #)
Total program costs			
Cost per patient tested			
Cost per positive HIV or syphilis			

24. Currency used in the study and base year (e.g. \$/2015):

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25. Any comments or reflections for the discussion section or quality appraisal (e.g., what is unique about this paper that makes it hard to compare results, concerns about quality and/or reporting)

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26. List other economic outcomes that are available but not reported in this review.

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Supplement 2. Study design types

Analytic method	Types of summary measures
Cost analysis	• Dollars • Dollars per unit of service rendered^a
Cost-effectiveness analysis ^b	• Dollars per case or injury averted • Dollars per person reached by intervention • Dollars per life saved • Dollars per life year saved
Cost-utility analysis	• Dollars per quality-adjusted life year • Dollars per disability-adjusted life year • Dollars per healthy-year equivalent
Cost-benefit analysis	• Net-benefits • Net present value • Benefit cost ratio

Source: Unpublished economic review data extraction sheet from the Centers for Disease Control and Prevention Community Guide.

^a In this review, dollars per unit of service rendered typically included outcomes such as cost per index patient interviewed, which reflect the cost of delivering the DIS intervention rather than the cost per outcome achieved by the DIS intervention.

^b Studies that assessed the cost per outcome achieved by the DIS intervention (such as cost per partner notified, cost per partner brought to treatment, and cost per case of sequelae averted) were classified as cost-effectiveness analyses regardless of the scope or complexity of the analysis. For example, whereas traditional cost-effectiveness analyses typically assess downstream effects of an intervention (such as sequelae costs averted by treatment or prevention of infections), studies were not required to have this level of complexity to be classified as cost-effectiveness analyses in this review.

Supplement 3. Completeness of study reporting checklist

Category	Checklist item
Study Objectives	Were the research question(s) and study objective(s) well defined?
Intervention and comparators	Were interventions and comparators, if applicable, clearly described?
Study population	Were characteristics of the study population (such as age range, demographics, socioeconomics, or clinical characteristics) described?
Contextual information	Was relevant contextual information that may influence findings provided? Examples include noting unique features of the study population (e.g., a younger population with a higher infection risk), the setting (e.g., a correctional facility where it is logistically easier to administer DIS interviews), or the health department setting (e.g., a decentralized structure that contributes to variability across sites). <i>Write N/A if the population is community-wide.</i>
Perspective	Were the analytic perspective(s) of the cost estimation and associated outcomes clearly stated? (Note: Many studies might include multiple perspectives such as societal and healthcare system costs. This question is about the clarity of reporting completeness rather than quality of the analysis, so select “yes” in the case of a study that only provides one perspective and cost outcomes but that states clearly the perspective.)
Currency, date, conversion	Were the costing year (i.e., the year to which all costs have been adjusted for in the analysis) and currency stated (e.g., \$USD 2016)? If relevant, was the price index used for the adjustment stated?
Inputs (cost data, effectiveness data)	Were the methods and inputs (e.g., values, ranges, data sources) reported and were the key assumptions described? (Note: Select “somewhat” if the authors reported the methods and inputs clearly but did not state any assumptions. Two things to consider when assessing this question is whether all references are provided and if authors were explicit about assumptions made.)
Outcome measures	Did the study describe the outcome measures and how they capture benefit(s) and harm(s)?
Uncertainty	Did the study discuss or report sensitivity analyses to characterize uncertainty associated with cost estimates? (Note: “Discuss or report” allows for some flexibility if a study did not include a sensitivity analysis but explained the rationale.)
Study limitations	Did the study report limitations, ethical or equity considerations not captured?

Supplement 4. Additional economic outcomes reported by study authors not included in the main manuscript

Study	Additional economic outcomes not reported in Table 2 of manuscript
Gift et al., 2006 ¹⁹	• Correctional institution costs for each scenario • Cost per case treated for each scenario (two perspectives: correctional institution and healthcare system) • ICER comparing three scenarios (two perspectives: correctional institution and healthcare system) • Healthcare system costs for each scenario (two perspectives: correctional institution and healthcare system) • Cost of providing PN, per male interviewed (including cost of females notified) • Note: These outcomes are not reported in this review because the primary purpose of the Gift et al., 2006 study was to compare screening strategies; it was infeasible for us to isolate economic outcomes for PN in these measures
Gift et al., 2008 ¹³	• ICER per cost of sequelae in women • Total healthcare cost • Total societal cost • Note: These outcomes are not reported in this review because the primary purpose of the Gift et al., 2008 study was to compare combinations of screening and PN strategies; it was infeasible to isolate economic outcomes for PN in these measures
Johnson et al., 2017 ²²	• Cost per index case assignment • Cost per index patient interviewed • Cost per partner notified of exposure
Rahman, 2010 ²⁰	• Total selective screening cost • Total PN cost • Total PN cost including selective screening • Average cost per syphilis case detected through selective screening, stratified by disease stage (primary and secondary, primary, secondary, early latent, early, and maternal) • Average cost per syphilis case detected through selective screening with PN, stratified by disease stage • Average cost per syphilis case detected through selective screening with PN including cases prevented through prophylactic treatment, stratified by disease stage • Average cost per case detected at different levels of attempts made to contact partners (“treatment intensity”) • ICER at different levels of attempts made to contact partners (“treatment intensity”) • Note: The ICERs by “treatment intensity” of PN are not reported

	in this review because they were not presented in a traditional format by the study author.
Reynolds et al., 2001 ²¹	• Values for results of sensitivity analysis
Silverman et al., 2019 ²³	• Cost per detailed partner services outcomes, stratified by infection (early syphilis, gonorrhea, and chlamydia) and county (King, Pierce, and Spokane): OPs assigned to STI partner services, OPs interviewed by DIS, identifiable partners from index patients, partners notified by DIS after index patients' DIS interviews, partners notified by OPs after DIS interviews, partners notified by DIS or OPs after index patients' DIS interviews, total partners of index patients notified, partners tested after index patients' DIS interviews, and total partners tested. • Cost per detailed enhanced partner services outcomes, stratified by infection (early syphilis, gonorrhea, and chlamydia) and county (King, Pierce, and Spokane): OPs tested for HIV after DIS interview, OPs with new HIV diagnoses, OPs with HIV identified as inadequately engaged in care, OPs with HIV re-linked to HIV care after DIS interview, and partners tested for HIV after index patients' DIS interviews. • Cost per detailed enhanced partner services outcomes for gonorrhea/chlamydia combined, stratified by county (King, Pierce, and Spokane): OPs accepting expedited partner therapy from DIS. • STI partner services outcomes per \$100,000 program investment, stratified by infection (early syphilis, gonorrhea, chlamydia, and gonorrhea/chlamydia) and county (King, Pierce, and Spokane): partners notified by DIS or OP after interview, partners tested after interview, partners treated after interview, clients (any STI partner services cases, partners, or other contacts) with new HIV diagnosis, OPs relinked to HIV care, and PrEP referrals accepted. (Note: This is a reformulation of other reported results.)
Williams et al., 2022 ²⁴	• The cost per patient tested for HIV or syphilis

Abbreviations: disease intervention specialists (DIS), human immunodeficiency virus (HIV), incremental cost effectiveness ratio (ICER), original patients (OP), partner notification (PN), sexually transmitted infection (STI)