STD Testing and Treatment Saves Money

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The Importance of Measurement

Public programs must be transparent.

Policy-makers often consider costs and benefits in funding decisions.

Tension between volume of health and social problems vs. money to address them.

Allows those providing the service to affected population to say what their efforts are accomplishing.

Can contrast efficiency of one method of intervention with another (eg., do we fluoridate the water supply or give all citizens fluoride pills?).
The Essential Difficulties of How to Measure What Didn’t Happen

Public health programs strive to “prevent” poor health outcomes.

How do you measure something that did NOT happen?

If you are able to measure it, how do you know that your intervention was what prevented it?
Prevention effectiveness is the systematic assessment of the impact of public health policies, programs, and practices on health outcomes by determining their effectiveness, safety, and costs.

Haddix AC, Teutsch SM, Corso PS
Reasons to Create a Measurement in Management

“If you can’t measure it, you can’t manage it.” Peter Drucker

Intuition, Trust, and Complexity:
- Intuition – often fallible
- Trust – often misplaced
- Complexity – by definition is difficult to understand

Measurement allows us to more objectively describe a phenomenon or occurrence.
Measurement or Metric?

A measurement is a numerical observation.

A metric is a system, or standard, for measuring something.
How Does This Apply to STD?

Many measures to describe the extent of sexually transmitted diseases in the U.S. exist (decades).

In 2017, per CDC:
- 1.7M cases of chlamydia
- 555,608 cases of gonorrhea
- 30,644 cases of infectious syphilis (Primary and Secondary stages)

State STD programs are funded to address (reduce) STD in their states.
Reference

Formulas for estimating the costs averted by sexually transmitted infection (STI) prevention programs in the United States

Harrell W Chesson, Dayne Collins and Kathryn Koski

Published: 23 May 2008

Sexually Transmitted Infection Costs Saved (STIC)

A metric created by CDC ~10 years ago so STD programs could describe the extent of their prevention effectiveness

Uses evidence-based costs for common sequelae of untreated chlamydia, gonorrhea, and syphilis

Uses evidence-based cost of lifetime care for a person with HIV

Allows STD programs to input their interventions (by health care providers and STD program staff)

Applies the evidence-based proportion of people who would have experienced a complication without the intervention

Applies the evidence-based cost to each complication averted
STD Interventions Captured in STIC

Males and females with chlamydia, gonorrhea, and P&S syphilis who were treated

Male and female partners to above cases who were treated

# HIV tests performed (limitation: STD program only)

Pregnant women with syphilis
Results for Indiana, 2018 STD Surveillance Data

Part 1: Direct medical costs saved
Benefits of treating persons with STDs

<table>
<thead>
<tr>
<th>Infection Prevented</th>
<th>Rate</th>
<th>Direct Medical Costs Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelvic inflammatory disease prevented*</td>
<td>2591.91</td>
<td>$5,974,334</td>
</tr>
<tr>
<td>Epididymitis prevented*</td>
<td>302.48</td>
<td>$95,887</td>
</tr>
<tr>
<td>Syphilis-related treatment and sequelae costs prevented</td>
<td>751.80</td>
<td>$496,940</td>
</tr>
<tr>
<td>Congenital syphilis prevented</td>
<td>2.59</td>
<td>$20,183</td>
</tr>
</tbody>
</table>

Subtotal: benefits in persons treated for STDs $6,587,354
Part 1: Direct medical costs saved

Benefits of interrupting STD transmission in the population

<table>
<thead>
<tr>
<th>Infection Prevented</th>
<th>Rate</th>
<th>Direct Medical Costs Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia prevented</td>
<td>15,659.00</td>
<td>$3,084,823</td>
</tr>
<tr>
<td>Gonorrhea prevented</td>
<td>5,139.00</td>
<td>$1,194,939</td>
</tr>
<tr>
<td>Syphilis prevented</td>
<td>180.50</td>
<td>$119,311</td>
</tr>
<tr>
<td>STD-attributable HIV cases</td>
<td>8.21</td>
<td>$1,882,681</td>
</tr>
</tbody>
</table>

Subtotal: benefits of interrupting STD transmission $6,281,753
Results for Indiana, 2018 STD Surveillance Data, cont.

Part 1: Direct medical costs saved

<table>
<thead>
<tr>
<th>Infection Prevented</th>
<th>Rate</th>
<th>Direct Medical Costs Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits of HIV counseling and testing (HIV cases prevented)</td>
<td>0.92</td>
<td>$211,832</td>
</tr>
</tbody>
</table>

Direct medical costs saved (total) $13,080,939
Indiana Results, cont.

Part 2: Indirect (lost productivity) costs saved

STDs (excluding HIV)* 90721.03 $3,859,956
HIV 9.13 $8,216,048
Indirect costs saved (total) $12,076,004

Total Costs Saved (Direct and Indirect) $25,156,943
Summary

Making sure that patients with STD and their exposed partners are treated is highly effective at preventing additional medical and indirect costs.