Unwitting transmission

Dr Anatole S Menon-Johansson
BSc, PhD, MB Bchir, MPH, FRCP
Guy's & St Thomas' NHS Foundation Trust (www.burrellstreet.co.uk)
Brook (www.brook.org.uk)
SXT Health CIC (www.sxt.org.uk)
SH:24 (www.sh24.org.uk)

Digital health and care congress 2018, TheKing’sFund>, 10th July 2018
The size of the STI problem

Globally
It has been estimated that eleven Sexually Transmitted Infections (STIs) are transmitted a second (1)

England
In 2017, there were 422,147 diagnoses of STIs. 203,116 diagnoses of Chlamydia, 59,119 diagnoses of anogenital warts
44,676 diagnoses of Gonorrhoea (^22% relative to the year prior) and 7,137 diagnoses of Syphilis (^20%) (2)

The majority of STIs spread results from unwitting transmission
80% of patients with Chlamydia do not have symptoms (3) compared with 16% of patients with Trichomoniasis (4)

(1) Unemo et al Sexually transmitted infections: challenges ahead. The Lancet Infectious Disease, Volume 17, No. 8, e235-e279, August 2017
(3) Brook STI audit 2017
(4) Analysis of five years of Trichomoniasis data Guy's & St Thomas' 2013-2018
STI transmission

Panel A: Core Infection Model

Panel B: Inverse Core Model

Panel C: Bridge Between Disjoint Populations

Panel D: Spanning Tree

Fig. 1.—The network structure of four models of infection

Looking at the National Chlamydia Screening Program:

• Total program in 2008-9 cost £46.3M and this £506 per infection treated
• PN within the program costs between £9 and £27, excluding treatment and testing
• Paper compares increasing testing versus improving the efficacy of PN

Turner et al  Costs and cost effectiveness of different strategies for chlamydia screening and partner notification: an economic and mathematical modelling study. BMJ 2010 DOI: 10.1136/bmj.c7250
SXT launched an anonymous PN tool in 2016.
Patient delivered PN & what the partner receives

1. Link to SMS to partner PN page
2. Supporting SMS for the partner
3. Partner PN page has information and a link to a short video
4. Unique partner code
5. Find a clinic or self notify
6. Instructions for the clinic reception team & the clinician to deliver effective PN
Partner sign off inside SXT or using a browser

www.sxt.org.uk/pn
Our big vision is to transform PN

<table>
<thead>
<tr>
<th>STI</th>
<th>England (Number / 100,000) [a]</th>
<th>London (Number / 100,000) [a]</th>
<th>Number of diagnoses [b]</th>
<th>Estimated cost to make one diagnosis (£) [c]</th>
<th>Partner testing (number / 100,000) [d]</th>
<th>Increase in testing efficiency when test partners [e]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>354</td>
<td>571</td>
<td>128,098</td>
<td>566</td>
<td>40,000</td>
<td>70x</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>64.9</td>
<td>186.6</td>
<td>35,014</td>
<td>1501</td>
<td>35,000</td>
<td>188x</td>
</tr>
<tr>
<td>Syphilis</td>
<td>10.6</td>
<td>33.6</td>
<td>5840</td>
<td>1930</td>
<td>12,000</td>
<td>357x</td>
</tr>
<tr>
<td>HIV</td>
<td>10.3</td>
<td>27.6</td>
<td>5164*</td>
<td>2500</td>
<td>4000</td>
<td>145x**</td>
</tr>
</tbody>
</table>

We interviewed 15 health professionals:

- Clinic Managers
- Consultants

We identified unmet user needs, and more specifically, the need for a triage booking system.
We tested prototypes in clinics with:
- Clinic Administrators
- Health Advisors
- Consultants
- Patients

The patient interface tested well, but we had to improve the language in admin interface.
SXT Booking module – How it works for patients

1. Search for clinics based on their needs.
2. See nearby clinics offering those services.
3. Browse clinics and see available time slots.
4. Select a time and book an appointment.
5. Receive SMS confirmation and reminder.

https://sxt.org.uk/appointments/about
A 36% increase in PN effectiveness over two weeks

<table>
<thead>
<tr>
<th>Analytics in the last 4 weeks</th>
<th>18th June 2018</th>
<th></th>
<th>Analytics in the last 4 weeks</th>
<th>29th June 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARTNERS SEEN PER INDEX CASE (KPI)</td>
<td>0.58</td>
<td></td>
<td>PARTNERS SEEN PER INDEX CASE (KPI)</td>
<td>0.79</td>
</tr>
<tr>
<td>TOTAL INDEX PATIENTS</td>
<td>244</td>
<td>TOTAL CONTACTABLE CONTACTS</td>
<td>602</td>
<td>TOTAL INDEX PATIENTS</td>
</tr>
<tr>
<td>NUMBER OF CONTACTABLE PARTNERS NOTIFIED</td>
<td></td>
<td>NUMBER OF PARTNERS SEEN &amp; TESTED</td>
<td></td>
<td>TOTAL CONTACTABLE CONTACTS</td>
</tr>
<tr>
<td>NOTIFIED VIA SXT</td>
<td>155</td>
<td>VERIFIED AT CLINIC VIA SXT</td>
<td>22</td>
<td>NOTIFIED VIA SXT</td>
</tr>
<tr>
<td>SELF VERIFIED BY PARTNER VIA SXT</td>
<td></td>
<td></td>
<td></td>
<td>SELF VERIFIED BY PARTNER VIA SXT</td>
</tr>
<tr>
<td>NOTIFIED BY INDEX PATIENT</td>
<td>203</td>
<td>VERIFIED BY THE INDEX PATIENT</td>
<td>82</td>
<td>NOTIFIED BY INDEX PATIENT</td>
</tr>
<tr>
<td>TOTAL CONTACTABLE PARTNERS NOTIFIED</td>
<td>358</td>
<td>TOTAL PARTNERS SEEN &amp; TESTED</td>
<td>141</td>
<td>TOTAL CONTACTABLE PARTNERS NOTIFIED</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TOTAL PARTNERS SEEN &amp; TESTED</td>
</tr>
</tbody>
</table>

SXT Booking module went live in Burrell Street
We want to achieve in the next 3 months…

1. Add additional targeted appointments in Burrell Street Sexual Health Clinic

2. Replicate the PN success in the other two clinics in Guy’s & St Thomas’ NHS Foundation Trust

3. Start to roll out SXT across the UK to support effective PN and access for people ‘at risk’ of having an STI
Thank you