Mobile Personal Sensing for Personalized Health & Wellness Among HIV+ Drug-Abusers

Mary Jane Rotheram
UCLA
HIV Evidence-Based Programs (EBP) have increased over time.
While hundreds of EPB have been documented, program utilization is low.
EBP take 20 years to design; 30 years to diffuse.

Efficacy > Effectiveness > Diffusion
In contrast, Facebook went from 0 - 200,000,000 users in 5 years.
Mobile technologies may allow us to break out of our current models of diffusing EBP.
Mobile Personal Sensing can broadly & quickly diffuse innovations.
MPS creates the Examined Life.

• Unobtrusively & continuously recorded
• Supplemented by prompted self-perceptions
• Linked in context &
• Integrating biological, emotional, social, & geographic data.
MPS integrates the person’s behavior record, with web-based information, & biological monitoring.
AndWellness: health behavior change through self monitoring

- real time (always on)
- real place (always carried)
- real context (historical, environmental, spatial, social)
Standardized Functions are common across all HIV EBP.

Frame
Apply health information
Monitor - Surveillance
Shape
Support
The processes are same for many diseases.
Health Care Delivery, Research on HIV, & Consumer Self-Management share standardized functions.
Penetration of Mobile Phones in Africa is higher than the US
Jumping over the era of wire, MPS has improved the Efficiency, Quality, & Ease of Data collection.
Mobile personal sensing is used for Assessment, Intervention Delivery, Support, System Integrity
Assessors in Kwa Zulu Natal monitor Pregnant HIV+ Mothers in their local communities.
Find Me applications allow tracking
Rapid, point-of-care diagnostics are revolutionizing surveillance & disease monitoring.
Mentor Mothers visit every household, clicks her phone on entry, indicates content, & gives feedback at end.
Mentor Mothers build social capital, provide education & support to families in home visits monitored in real time.
Account Overview

This is your account overview page. From here you can see all the latest activity across the scope of your research projects.

Responses Uploaded in last 90 days

Total Responses for Top 5 Surveys

<table>
<thead>
<tr>
<th>Key</th>
<th>Survey Title</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Clinic Register</td>
<td>3520</td>
<td>91.29%</td>
</tr>
<tr>
<td>2</td>
<td>Clinic</td>
<td>114</td>
<td>2.96%</td>
</tr>
<tr>
<td>3</td>
<td>02 Pre-Assessment</td>
<td>85</td>
<td>2.23%</td>
</tr>
<tr>
<td>4</td>
<td>01 Pre-Assessment</td>
<td>72</td>
<td>1.87%</td>
</tr>
<tr>
<td>5</td>
<td>03 Pre-Assessment</td>
<td>64</td>
<td>1.66%</td>
</tr>
</tbody>
</table>

Latest Communication

- **23 Jul** 2017: Sorry, I see Monday. But nothing for Tuesday or today. **sent to HSRC 015 2630 (Balcowan)**
- **23 Jul** 2017: Hi Tole, I have not received any clinic counts from you f... **sent to HSRC 015 2630 (Balcowan)**
- **08 Jul** 2017: Hi Buyi, please use the first 6 numbers of your id as the... **sent to HSRC 016 2630 (Howick)**
Mentor Mothers in clinics send text messages, record & rate session content for pregnant, HIV+ mothers.
Mobile phones allow Diabetes Buddies to text social support messages to peers.
MPS helps mothers obtain information to secure a Child Grant.
Potential exists to use MPS for identifying community pollution.
New technologies create shared platforms, not always OPEN.
Each research team, country, & disease specialty reinvents their own MPS program.
Open platforms create simpler, cheaper, & good enough solutions that will be optimized over time.
Standardized, open platforms allow substantial tailoring.
Open-source platforms are needed to realize the public health potential of technology.
Time is of the Essence when investing to keep an open-source Platform.
Researchers & providers are typically 10 years late.
Thank You