Opportunities for collaboration and leveraging participant recruitment initiatives across UC Health

October 19, 2016 – UC BRAID Retreat

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UCSF

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What we’ll cover today

Participant Recruitment Innovations and advances at UCSF in the last year

1. Use of social media for recruitment and TrialSpark pilot at UCSF
2. The UCSF-wide Trial Finder including tie-ins to UCSF Profiles (our researcher networking system)
3. Seminars and videos
4. Future opportunities for collaboration across UC
Why Use Social Media for Recruitment?
## Recruitment Tactics

<table>
<thead>
<tr>
<th>Recruitment Possibilities</th>
<th>Cost</th>
<th>Time for implementation*</th>
<th>Who are you reaching?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craigslist</td>
<td>Free</td>
<td>+</td>
<td>General Public</td>
</tr>
<tr>
<td>Flyers (do it yourself)</td>
<td>$</td>
<td>+</td>
<td>General Public</td>
</tr>
<tr>
<td>UCSF Direct Patient Letters</td>
<td>$</td>
<td>+++</td>
<td>Diagnosis Specific</td>
</tr>
<tr>
<td>Clinic Recruitment</td>
<td>$</td>
<td>+</td>
<td>Diagnosis Specific</td>
</tr>
<tr>
<td>Social Media (Facebook, Twitter, Google ads)</td>
<td>-$$</td>
<td>+</td>
<td>General Public/Some general demographic targets (age, region, race)</td>
</tr>
<tr>
<td>Health Fairs/Foundations</td>
<td>-$$</td>
<td>+++</td>
<td>General Public or Condition Specific</td>
</tr>
<tr>
<td>UCSF Shuttle Ads</td>
<td>-$$</td>
<td>+++</td>
<td>UCSF faculty, staff and patients</td>
</tr>
<tr>
<td>Flyers (Service Provider)</td>
<td>$$</td>
<td>++</td>
<td>General Public</td>
</tr>
<tr>
<td>Newspapers (County)</td>
<td>$$</td>
<td>+</td>
<td>General Public</td>
</tr>
<tr>
<td>Newspaper (Local/neighborhood)</td>
<td>$$</td>
<td>++</td>
<td>General Public</td>
</tr>
<tr>
<td>Mass Mailing Service</td>
<td>$$$$</td>
<td>+++</td>
<td>General Public</td>
</tr>
<tr>
<td>Radio Ads</td>
<td>$$$$</td>
<td>++</td>
<td>General Public</td>
</tr>
</tbody>
</table>

* + About 1 week or less
** About 2-4 weeks
*** About 1-2 months
Top Ways that People Report Finding out About Clinical Trials

- Internet: 46%
- The Media (TV, Radio, Newspapers): 39%
- eMail: 32%
- Research Center Ads: 28%
- My Physician or Nurse: 23%
- Mail: 21%
- Family/Friends: 13%

Percent Mention

Source: CISCROP, 2013; N=5,701 people worldwide
Facebook Usage Among Key Demographics

GENDER
- 66% MEN
- 77% WOMEN

AGE
- 18-29: 87%
- 30-49: 73%
- 50-64: 63%
- 65+: 56%

LOCATION
- 71% URBAN
- 72% SUBURBAN
- 69% RURAL

INCOME
- 72% > $75K
- 74% $50K-$75K
- 69% $30K-$49K
- 77% < $30K

EDUCATION
- 74% COLLEGE GRADUATE
- 71% SOME COLLEGE
- 70% HIGH SCHOOL OR LESS

Source:
http://www.pewinternet.org/files/2015/01/PI_SocialMediaUpdate20144.pdf
Participant Recruitment Metrics
The “Typical” Funnel
Average Industry Benchmark Data

Patients Identified or Available
100

Overall Conversion Ratio:
Identify 10 Patients to Randomize 1

Pre-Screen
31
Pre-Screen Qualified
0
Consent Process
13
Consented
9
Screening
Randomized
Drop-Outs

-69%
-58%
-32%
-18%

# Completed Patients
7

Benchmark Data – CPP and PhESI-1998-2012
Online Recruitment Funnel

- Views
  - Targeted
- Clicks
  - Catchy, Appealing
- Registrations
  - Simple
- Screen Pass
  - Flexible
- Enrollment
  - Convenient
Measuring Impact of Recruitment
Accrual Index

\[
\text{Accrual Index} = \frac{\text{(Evaluable Subjects Enrolled/Accrual Target)}}{\text{(Days since recruitment start/30)}/\text{Projected Time to Accrual(mos)}}
\]

How to interpret:

\[
\frac{2/3 \text{ accrued}}{2/3 \text{ time elapsed}} = 1.0; \text{ on-time accrual}
\]

\[
\frac{1/4 \text{ accrued}}{1/2 \text{ time elapsed}} = 0.5; < 1.0 = \text{behind}
\]


THE ROCKEFELLER UNIVERSITY HOSPITAL
CENTER FOR CLINICAL AND TRANSLATIONAL SCIENCE
TrialSpark Pilot
TrialSpark Scope of Services

Custom-built Landing Pages

Comprehensive Trial Analytics

Participant Feedback and Engagement

Recruitment Management Platform

Social Media Advertising Campaigns

Facebook Ads
Google AdWords
Twitter Advertising
## TrialSpark Pilot Awardees

### naïve Projected Time to Accrual Completion

<table>
<thead>
<tr>
<th>Study Name</th>
<th>Population</th>
<th>Target Enrolled</th>
<th>nPTAC</th>
<th>Currently Enrolled</th>
<th>Elapsed Time</th>
<th>Accrual Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURE</td>
<td>Women 21+ with UI</td>
<td>160</td>
<td>36 mo</td>
<td>58</td>
<td>17 mo</td>
<td>0.77</td>
</tr>
<tr>
<td>TRIUMPH</td>
<td>Women 65+ with UI</td>
<td>50</td>
<td>12 mo</td>
<td>0</td>
<td>TBD</td>
<td>NA</td>
</tr>
<tr>
<td>mMoon</td>
<td>Migraineurs 12-17 yrs</td>
<td>38</td>
<td>19 mo</td>
<td>14</td>
<td>15 mo</td>
<td>0.50</td>
</tr>
<tr>
<td>IUD</td>
<td>Women on Birth Control</td>
<td>15</td>
<td>12 mo</td>
<td>5</td>
<td>15 mo</td>
<td>0.20</td>
</tr>
</tbody>
</table>
## Participant Recruitment & Quality

Cost, Views, Clicks, Conversions

<table>
<thead>
<tr>
<th>Study</th>
<th>Elapsed Time</th>
<th>Spent</th>
<th>Views</th>
<th>Clicks</th>
<th>Registrations</th>
<th>Eligible</th>
<th>Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURE</td>
<td>2.3 mo</td>
<td>$939</td>
<td>73,706</td>
<td>3,239</td>
<td>135</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2.0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIUMPH</td>
<td>3.5 mo</td>
<td>$1315</td>
<td>24,120</td>
<td>2,325</td>
<td>113</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mMoon</td>
<td>5.7 mo</td>
<td>$2123</td>
<td>70,477</td>
<td>4,636</td>
<td>73</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2.1%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IUD</td>
<td>1.4 mo</td>
<td>$988</td>
<td>57,885</td>
<td>3,545</td>
<td>540</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3.5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2%-3.5% Response Rate
## Impact of TrialSpark Recruitment

Accrual Index Pre and Post Trial Spark

<table>
<thead>
<tr>
<th></th>
<th>Pre-TS Accrual Index</th>
<th>Post-TS Accrual Index</th>
<th>Both Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURE</strong></td>
<td>0.77</td>
<td>0.29</td>
<td>1.06</td>
</tr>
<tr>
<td><strong>TRIUMPH</strong></td>
<td>NA</td>
<td>0.41</td>
<td>NA</td>
</tr>
<tr>
<td><strong>mMoon</strong></td>
<td>0.50</td>
<td>1.23</td>
<td>1.69</td>
</tr>
<tr>
<td><strong>IUD</strong></td>
<td>0.20</td>
<td>5.71</td>
<td>2.93</td>
</tr>
</tbody>
</table>
# Affordability

Projected Online Budget to Reach Target Enrollment Using TrialSpark

<table>
<thead>
<tr>
<th>Study</th>
<th>Cost per Enrolled</th>
<th>Targeted/Projected Monthly Enrollment</th>
<th>Estimated Monthly Cost to Reach Target</th>
<th>Annual On-line Budget</th>
<th>Year 1 Costs including TrialSpark Start-up (one-time $3K) and Maintenance Services for 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURE</td>
<td>$157</td>
<td>x 4.5</td>
<td>$706.5 x 12 = $8,478</td>
<td>+ $9K = $17,478</td>
<td></td>
</tr>
<tr>
<td>TRIUMPH</td>
<td>$219</td>
<td>4.2</td>
<td>$920</td>
<td>$11,038</td>
<td>$20,038</td>
</tr>
<tr>
<td>mMoon</td>
<td>$152</td>
<td>2</td>
<td>$304</td>
<td>$3,648</td>
<td>$12,648</td>
</tr>
<tr>
<td>IUD</td>
<td>$197</td>
<td>1.25</td>
<td>$246</td>
<td>$2,955</td>
<td>$11,955</td>
</tr>
</tbody>
</table>
## Reaching Older Populations

### CURE 18-65 and TRIUMPH 65+ Study Conversions by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Registrations</th>
<th>Reach</th>
<th>Cost per Result (USD)</th>
<th>Amount Spent (USD)</th>
<th>P-value for Fisher test comparing conversion rate with 55-64 group</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-17</td>
<td>0</td>
<td>2</td>
<td>$0.00</td>
<td>$0.00</td>
<td>1.000</td>
</tr>
<tr>
<td>18-24</td>
<td>8</td>
<td>10475</td>
<td>$10.28</td>
<td>$82.25</td>
<td>0.002</td>
</tr>
<tr>
<td>25-34</td>
<td>16</td>
<td>19567</td>
<td>$10.87</td>
<td>$173.85</td>
<td>0.001</td>
</tr>
<tr>
<td>35-44</td>
<td>11</td>
<td>12099</td>
<td>$11.77</td>
<td>$129.44</td>
<td>0.003</td>
</tr>
<tr>
<td>45-54</td>
<td>9</td>
<td>7568</td>
<td>$10.75</td>
<td>$96.79</td>
<td>0.041</td>
</tr>
<tr>
<td>55-64</td>
<td>16</td>
<td>5635</td>
<td>$5.44</td>
<td>$87.09</td>
<td>--</td>
</tr>
</tbody>
</table>

| 65+  | 113           | 24,120 | $11.64                 | $1,315.36          |                                                               |
When do participants register?
User Perception of Impact of TrialSpark Services on Recruitment

Overall Impact of TrialSpark on Recruitment
- Greatly exceeded goals
- Exceeded goals
- Reached goals

Impact of TrialSpark Recruitment Management System
- Much more effective
- More effective

Impact of Targeted and Data-Driven Advertising Campaigns
- 100%
- Much more impact
Overall, how satisfied are you with TrialSpark?

- Very satisfied: 100%

...level of customization?

- Very satisfied: 100%

...usability of data management system?

- Very satisfied: 100%

Will you use TrialSpark again?

- Definitely yes
- Probably yes
- Might or might not

Service fee was stated as a potential barrier
Recommendations

Refer CS clients to TrialSpark who would be a good fit.

- Plan to recruit from the general public
- Annual recruitment budget of at least $15K
- Do not have staff resources to build a website, create Facebook ads and/or track success of these ads

Encourage TrialSpark to develop a “pilot” funding band. Studies would qualify if they have

- Limited funding (<$60,000)
- Sample size < 50
- plans to use the results to apply for a larger grant
clinicaltrials.ucsf.edu and profiles.ucsf.edu
UCSF needed a better “condition-agnostic” trial finder

• No comprehensive nor easy way to see the entire landscape of clinical studies
• Studies are shown across multiple sites
• Hard for the public to find, assess, and engage
• Hard for researchers to find partners
Three goals for the current UCSF project:

1. Create patient-friendly site of UCSF trials, focused on those that are open to enroll

2. Design for efficiency and re-use

3. Cross link with UCSF Profiles and UCSF Medical Center
Current status

- Internal launch
- Quick Demo
Approach to the project

- Technical
  - Automate whenever possible
  - Re-usable code

- Social
  - Make friends and establish partnerships
  - Use multi-channel communications

- Financial
  - Obtain enterprise support
Technical: a bit of detail on implementation

- Data – digesting, validating, smart usage
- User Interface – helping users find trials, take action
- Optimization for search - google rules the internet
Technical: Data

- Reliance initially on clinicaltrials.gov data
- Validation and correction of data with outreach
- Logic applied for completeness
- Designed so that other centers, institutes, labs and departments can re-use the data
- Cross-linked with UCSF Profiles and trials listed on pages
Technical: User Centered Design

- Sophisticated search features
- Clear actions
- Targeted ancillary links
Social: Partnerships

Worked across enterprise to garner support, input, expertise

UCSF Medical Center

UCSF Memory and Aging Center

Executive Vice Chancellor & Provost

UCSF School of Medicine

UCSF Information Technology

UCSF Department of Pediatrics

University Relations

CVP
Center for Vulnerable Populations at SFGH
Department of Medicine

BreastCancerTrials.org
find a trial that’s right for you
Social: Communications

Promote trial finder to the community with a Communications Strategy that includes:

- Partners
- Researchers and research community at UCSF
- Public
Financial: Enterprise support

- Presented the project early on to enterprise-wide IT Governance Committee
- Proposed a 50/50 cost share and got it!
- Exposure helped garner support across the institution resulting in great partnerships
What’s next?

- Public launch of Trial Finder soon
- Many ideas to extend functionality and data
  - Integrate with TrialSpark?
  - Use data from EMR to recommend studies
  - Translation including from scientific to lay English
  - Machine learning for categorization, synonyms, etc.
  - And more…

- Awarded NIH Network Capacity Admin Supplement to extend model across UC Health campuses
A few more initiatives

- Joint IRB/CTSI Seminar: New Approaches for Participant Recruitment: What’s Hot (and What’s Not)
  - Heavy interest from CRC and faculty
  - ~100 attendees
  - Recorded! Watch it here: http://tinyurl.com/UCSF-PR-seminar2016

- Short educational videos to allow deeper dive on certain topics
  - Mistakes to avoid in recruitment
  - Principles of communications
  - How to recruit ethically
Longer term plans

Plan to submit a proposal for NIH Collaborative Innovation Award (CIA) in early 2017 focused on Participant Recruitment

- Led by Vanessa Jacoby MD, Director of Participant Recruitment Program at UCSF CTSI
- In collaboration with UCs and CTSAs
Opportunities to collaborate now and later?

Lots!! Join a breakout session and/or get in touch
(and we will be in touch!)

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