COVID-19 Contact Tracing Conundrums and Beyond: Voices from the Front Line

John Schneider MD, MPH
Professor, University of Chicago
Medical Director, 55th Street Howard Brown Health

12/8/20
AIDS Foundation of Chicago
Disclosures

• NIH, CDC, HRSA, University of Chicago, Howard Brown Health
Goals for Today

• Overview of COVID-19 Contact Tracing

• Frontline experiences from Howard Brown Health

• Early results from national survey on vaccine acceptability

• Next steps for comprehensive COVID-19 prevention
  – Example of University of Chicago RADx-UP project

• Discussion
What is contact tracing?

• Identify carriers of an infectious disease and uncover network members who may have been exposed to isolate those at risk and halt disease spread

• Public health service implemented DIS for syphilis in 1930s

• Measles, HIV, syphilis, Ebola
Figure 1. Social network of Black MSM and TGW (n=620), South Chicago, United States
Bridging Network Member
Why not just tell positive index clients and their network members to isolate?

- Network members linked to a person with +COVID-19 can (and should) come safely to testing site
  - Fear and misinformation about COVID-19 transmission

- We are finding 75% of household members are positive

- Indexes and network members frequently have discordant reports and understanding on one another’s social contacts and behaviors

- Network members need education, reassurance and resources

- Need to get ahead of transmission chain
  - Community members can make what seem like reasonable decisions in the absence of expert guidance
Why not have centralized public health department contact tracing implementation

• Health departments are best suited for convening multiple stakeholders

• Health departments may be best suited for outbreak investigations

• Local agencies and community focused groups experience more community member buy-in and trust

• Clinics play a central role in providing additional services to network members
  – Testing for network members; insurance navigation; social services and resources; other clinical care

• Health departments could enforce quarantine which could be counterproductive

• Institutional racism
When should COVID-19 contact tracing be initiated?

- At time of symptom onset (t= -2-5 days)
- Before index testing event (t= -30 minutes)
- At the testing event (t=0)
- Following testing event (t=1 day)
- At time of result provision (t=2-7 days)
- *Following result provision (t=8-10 days)*

Potential 15 day lag from symptom onset
Contact Tracing Timeline

- **Transmission Event**
  - Day 0

- **Testing Event**
  - Day 4-7
  - Results available
  - Results disclosed to patient

- **Symptomatic**
  - Day 3-5

- **Pre-symptomatic**
  - Day 3-5

- **Early Contact Tracing**
  - Day 5-10

- **Later Contact Tracing**
  - Day 16

- **Social Service Interventions**
  - Day 30
Why not utilize cutting edge Microsoft/Apple/Google smartphone technology?

- Poor specificity
- Privacy concerns
- Older people have lower smartphone usage
- Digital Divide
- Marginalized populations
- Limited human touch
COVID-19 contact tracing at HBH

- Developed a program after the first COVID-19 was identified 3/13/2020

- Converted partner services staff to COVID-19 contact tracing staff
  - 3 people initially (me, Willie and Phillip)
  - 15 people by April (included behavioral health)
  - 92 people by May
    - large contingent of temp workers
    - Spanish speaking contact tracers
  - Currently at 26 full time contact tracing staff (80% Spanish/English)

- Training
  - Association of State and Territorial Health Officials (ASTHO) and Johns Hopkins Trainings
  - Observation
  - Weekly forum
HBH COVID-19 Contact Tracing

• Contact tracing interviews last 30 minutes and data initially collected in excel, then network canvas and soon salesforce

• Empirical contact tracing for high prevalence sites
  – Weekly tracking – peak of 67%

• Additional touches to engage clients, networks, marginalized communities and provide care, resources and services

• Weekly citywide forum for ongoing technical support and training
HBH COVID-19 Contact Tracing Continuum

• Total # of COVID Tests: 53,652
  Total # of Positive COVID Results: 7299
  COVID Positivity - 7299/52048 = 14% (varies by site)

• Positive Interview Rate - 3677/7299 = 50.3%
  Presumptive interview rate – 2524/9425 = 26.8%

• Contacts elicited from positive interviewed patients – 3609
  Contact index - 3609/3677 = .98

• Contacts interviewed – approximately 1 for every 3 interviews
  – Stigma, already tested, institutional mistrust, limited contact information, no answer, not enough time to do interview, CT fatigue
Next Steps for Comprehensive COVID-19 Prevention
Few people plan to get a COVID vaccine when it’s available (n=1095)

- Yes, but will wait until proven safe and effective: 44.10%
- No, will not get coronavirus vaccine: 23.60%
- Don't know: 17.00%
- Yes, as soon as it's available to me: 15.10%

UC/NORC Amerispeak
Concern for side effects and promotion by politicians to win votes were top reasons not to get COVID vaccine (n=259)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concerned About Side Effects</td>
<td>81.0%</td>
</tr>
<tr>
<td>Politicians will Promote to Win Votes</td>
<td>73.9%</td>
</tr>
<tr>
<td>Concerned About Infection from Vaccine</td>
<td>61.0%</td>
</tr>
<tr>
<td>Majority of Public Won't Get Vaccinated</td>
<td>51.0%</td>
</tr>
<tr>
<td>Don't Think Vaccines Work</td>
<td>50.0%</td>
</tr>
<tr>
<td>Not Concerned About Illness</td>
<td>49.4%</td>
</tr>
<tr>
<td>Pandemic Isn't Serious</td>
<td>43.6%</td>
</tr>
<tr>
<td>Other</td>
<td>25.7%</td>
</tr>
<tr>
<td>Dislike Needles</td>
<td>22.0%</td>
</tr>
<tr>
<td>Allergic</td>
<td>12.8%</td>
</tr>
<tr>
<td>No Time</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

UC/NORC Amerispeak
Doctor recommendations and offering free vaccines may make some reconsider getting the COVID vaccine (n=259)

- Nothing will Change Mind: 65.7%
- Doctor Recommends: 15.5%
- Close Friends get Vaccine: 14.0%
- Majority of Public gets Vaccine: 13.0%
- Vaccine is Free: 12.3%
- Famous People get Vaccine: 6.3%

UC/NORC Amerispeak
Community Network-Driven COVID-19 Testing of Vulnerable Populations in the Central US (C3)

• NIH project as part of the RADx-UP initiative

• Test the Social Network Strategy as an alternative to Contact Tracing with promotion of testing and comprehensive prevention (including vaccination)

• 8 Sites: Chicago (2), Southern Illinois, Porter and Lake County Indiana, Little Rock, Baton Rouge, Dallas

• Focus on two most disenfranchised sub-populations
COVID-19 in the United States: Health Inequities

• COVID-19 impacts *disenfranchised* US residents differently from the general US population

• Disenfranchisement is a status that results in distrust of public institutions and therefore individuals do not participate in services, resources, and benefits.

• Disenfranchisement generates, maintains, and propagates vulnerability both directly and indirectly.

• Two examples of disenfranchised populations our team focuses on are low-income LatinX/Hispanic (250% of federal poverty level) and criminal justice involved populations (recent prison, jail, drug court, probation/parole)
Low-Income Latinx

• 25% of Latinx people are employed in essential service industries (e.g., food service, factory processing)

• Latinx are also more likely to have three or more generations reside in a household

• Latinx who are undocumented or who are in mixed-status households are more likely to be uninsured and less likely to access and utilize healthcare services including COVID-19 testing and prevention
Criminal Justice Involved

COVID-19 Prevention among criminal justice involved participants: AmeriSpeak Nationally Representative Sample (n=1,036), Fielded April 30 – May 4, 2020

- Personally/Household tested + for COVID (of those tested):
  - No Criminal Justice Involvement: 9.9%
  - Yes Criminal Justice Involvement: 17.2%
  - 1.7 times as likely

- Have household member die from COVID:
  - No Criminal Justice Involvement: 0.5%
  - Yes Criminal Justice Involvement: 9.0%
  - 18 times as likely

- Wore a mask when leaving home:
  - No Criminal Justice Involvement: 75.6%
  - Yes Criminal Justice Involvement: 53.2%
  - 0.7 times as likely

- Have avoided in-person contact:
  - No Criminal Justice Involvement: 80.0%
  - Yes Criminal Justice Involvement: 57.8%
  - 0.7 times as likely
Social Network Strategy

• Referral processes
  o Clients and network members have ongoing relationships with one another (rapport, credibility)
  o Compensation for successful referral

• Social network outreach
  o Requires minimal staff and financial resources

• For C3 we will utilize a two step approach and not restrict network member eligibility
Study Visit Procedures

1. Client informed consent
2. Tablet survey
3. Randomization
4. Messaging
5. Test administration
6. SNS referral

Funded September 2020
Next Steps

• Continue to push for resource support for individuals and their networks experiencing COVID-19
  o C3 provides up to $500 cash support for COVID-19 positive folk

• Leverage contact tracing, social network strategy and other network referral procedures for diffusion of innovation
  o Messaging
  o Linkage to vaccination
Thank-you!

Community
Patients
Collaborators
Students, Trainees and Staff
Funders

jschnei1@medicine.bsd.uchicago.edu