Chicago Meningococcal Outbreak Survey Results

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National Center for Immunization and Respiratory Diseases
Centers for Disease Control and Prevention (CDC)
Epi-Curve/Events timeline

- **Mid-May**: Vaccination recommendation for HIV+ MSM
- **Early June**: Vaccination recommendation changed to include all MSM
- **June 28**: Pride Weekend
- **July 5**: Black Pride Weekend
- **Mid Sommarfest Event 06/20-21**
- **Survey Period**: Week 4 to Week 9
Survey Administration

- Objectives
  - To know the population demographics of those taking the vaccine
  - Assess the appropriate communications platform to reach the AA MSM community
  - Assess invasive meningococcal disease risk factor prevalence in the population
- Designed with technical inputs from CDC’s STD and MVPD Branch and CDPH
- Piloted in a MSM focused clinic and revised after feedback
- Surveys were administered in clinics, events and during night outreaches in bars and clubs
- 1276 surveys administered. 1162 surveys included in the analysis
Survey Sites

- Events (N=916):
  - Center on Halstead (Pride Fest)
  - MidSommarfest
  - Pride at Montrose Park
  - Events organized by South Side Help Center

- Clinics (N=189):
  - Howard Brown Health Center
  - CORE Center
  - Northwestern Lakeview Clinic
  - Komed Health Center

- Other Venues (N=57):
  - Jackson Park
  - Club Escape
Results: Demographics
Demographics: Age distribution

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24yrs</td>
<td>26%</td>
</tr>
<tr>
<td>25-34yrs</td>
<td>14%</td>
</tr>
<tr>
<td>35-44yrs</td>
<td>23%</td>
</tr>
<tr>
<td>45-54yrs</td>
<td>23%</td>
</tr>
<tr>
<td>55-64yrs</td>
<td>7%</td>
</tr>
<tr>
<td>≥ 65yrs</td>
<td>6%</td>
</tr>
</tbody>
</table>

N | Mean | Median | Minimum | Maximum | Std Dev |
---|------|--------|---------|---------|---------|
1141 | 42.92 | 42 | 19 | 85 | 13.41 |
Demographics: Educational Level

Educational Level

- 0% of Respondents (ES/Some HS)
- 6.6% (High School)
- 20.4% (Some College/Associate degree)
- 40.9% (College)
- 31.1% (Grad School)
- 0.2% (Others)

N=1152
### Educational level by Race/Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>ES/Some HS</th>
<th>High School</th>
<th>Some College/Associate</th>
<th>College</th>
<th>Grad School</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other MSM</td>
<td>0.18%</td>
<td>0.78%</td>
<td>1.91%</td>
<td>3.65%</td>
<td>3.04%</td>
<td>0.00%</td>
</tr>
<tr>
<td>White MSM</td>
<td>0.35%</td>
<td>2.43%</td>
<td>9.20%</td>
<td>27.60%</td>
<td>22.74%</td>
<td>0.09%</td>
</tr>
<tr>
<td>Hispanic MSM</td>
<td>0.26%</td>
<td>0.78%</td>
<td>2.69%</td>
<td>2.95%</td>
<td>1.30%</td>
<td>0%</td>
</tr>
<tr>
<td>Black MSM</td>
<td>0.35%</td>
<td>2.43%</td>
<td>5.90%</td>
<td>3.73%</td>
<td>2.17%</td>
<td>0.09%</td>
</tr>
<tr>
<td>Asian MSM</td>
<td>0%</td>
<td>0.17%</td>
<td>0.61%</td>
<td>2.86%</td>
<td>1.74%</td>
<td>0%</td>
</tr>
</tbody>
</table>

N=1152
P<0.005
Demographics: Race/Ethnicity

Survey (N=1,153)

- White/Caucasian: 64.3%
- Black/AA: 5.4%
- Hispanic: 15.6%
- Asian: 3.5%
- American Indian/Alaska Native: 1.8%
- Hawaiian/Pacific Islander: 0.3%
- Mixed Race: 0.2%
- Others: 9.0%

Statewide Estimation of Racial/Ethnic Populations of Men Who Have Sex with Men (N=319,438)

Lieb S. et al, 2011

- White: 72.1%
- Black: 10.4%
- Hispanic: 14.6%
- Asian: 2.4%
- American Indian/Alaska Native: 0.1%
- Hawaiian/Pacific Islander: 0.0%
- Others: 0.4%
Demographics: Sexual Orientation

- Homosexual: 92.10%
- Bisexual: 6.48%
- Others (Queer): 1.42%

N = 1,127

- White MSM:
  - Homosexual: 95.56%
  - Bisexual: 4.44%
  - N = 721

- Black/AA MSM:
  - Homosexual: 81.76%
  - Bisexual: 18.24%
  - N = 170

- Asian MSM:
  - Homosexual: 98.39%
  - Bisexual: 1.61%
  - N = 62

- Hispanic MSM:
  - Homosexual: 94.57%
  - Bisexual: 5.43%
  - N = 92

P < .0001
Knowledge, Attitudes and Behaviour
Awareness of Outbreak/Vaccine Campaign

- Aware of Outbreak: 88.0% (N=1,087)
- Aware of Campaign: 69.7% (N=1,133)

Bar chart showing the percentage of respondents aware of the outbreak and the campaign.
Awareness of Outbreak by Race

<table>
<thead>
<tr>
<th>Statistic</th>
<th>DF</th>
<th>Value</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>5</td>
<td>18.1503</td>
<td>0.0028</td>
</tr>
</tbody>
</table>

Aware of Outbreak

- WhiteMSM: 90.8%
- Other MSM: 87.9%
- MixedMSM: 87.5%
- HispnMSM: 84.5%
- AsianMSM: 82.5%
- BlackMSM: 79.8%
Awareness of Outbreak by Age group

<table>
<thead>
<tr>
<th>Statistic</th>
<th>DF</th>
<th>Value</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>5</td>
<td>32.9845</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>
Sources of Information about Outbreak (All respondents)

- Friends: 40.4%
- TV News: 39.6%
- Facebook: 31.4%
- E-mail: 21.2%
- Newspaper: 13.8%
- Doctor's Office: 5.3%
- Flyer: 5.0%
- Poster: 2.8%
- Dating App: 2.4%
- Twitter: 2.2%
- Pharmacy: 1.1%

N=1,006
Sources of Information about Outbreak by Race/Ethnicity

*No statistically significant association between Race/Ethnicity of Respondents and Email or Newspaper
Sources of Information about Outbreak by Age group

*No statistically significant association between Age group of Respondents and Email
Sources of general information in the past week

- Chicago TV News: 67.0%
- Chicago Station Online News: 60.3%
- Chicago News on FB: 52.4%
- Chicago Tribune: 39.8%
- Email from CBOs: 32.6%
- Windy City Times: 25.9%
- Email from Providers: 20.3%
- CDPH website: 18.5%

N = 960 - 1,081
### Sources of general information in the past week

<table>
<thead>
<tr>
<th>Source</th>
<th>BlackMSM</th>
<th>Hisp MSM</th>
<th>White MSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago TV News</td>
<td>79%</td>
<td>69%</td>
<td>66%</td>
</tr>
<tr>
<td>Chicago News on FB</td>
<td>53%</td>
<td>44%</td>
<td>53%</td>
</tr>
<tr>
<td>Chicago News on Twitter</td>
<td>22%</td>
<td>22%</td>
<td>15%</td>
</tr>
<tr>
<td>Email from Providers</td>
<td>29%</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td>Chicago Station Online News</td>
<td>64%</td>
<td>63%</td>
<td>59%</td>
</tr>
<tr>
<td>Chicago Tribune Online News</td>
<td>38%</td>
<td>31%</td>
<td>42%</td>
</tr>
<tr>
<td>Email from CBOs</td>
<td>37%</td>
<td>29%</td>
<td>32%</td>
</tr>
<tr>
<td>Windy City Times</td>
<td>25%</td>
<td>30%</td>
<td>26%</td>
</tr>
<tr>
<td>CDPH website</td>
<td>21%</td>
<td>15%</td>
<td>17%</td>
</tr>
</tbody>
</table>

*Statistically significant association between Race/Ethnicity and TV, Facebook, Twitter, Health Provider Email.*
Factors influencing decision to take vaccine

- I get all vaccines recommended for me: 49.1%
- I thought I was at high risk: 33.7%
- My friends thought I should get it: 29.5%
- My partners were getting it: 15.0%
- My doctor recommended it: 7.0%
- My Family thought I should get it: 5.1%
- Others: 5.2%
- I know someone who had meningitis: 3.7%

N=1,005
Factors influencing decision not to take vaccine

- Not at high risk: 53.1%
- Heard bad things about the vaccine: 31.3%
- Don’t believe there is an outbreak: 7.4%
- Would interact with my medication: 7.4%
- Don’t believe in vaccines: 3.9%
- Was convinced not to get it: 3.9%
- Knew someone with side effect: 0.0%
- The shot is too painful: 0.0%

N=27
Preferred Method of Learning about Future Campaign

- E-mail: 49%
- Facebook: 31%
- TV News: 27%
- Doctor's Office: 20%
- Friends: 17%
- Newspaper: 11%
- Flyer: 6%
- Pharmacy: 5%
- Poster: 4%
- Twitter: 4%
- Dating App: 2%

N=1,020
Risk of Invasive Meningococcal Disease
HIV Status Prevalence (Self reported)

- **Asian MSM**
  - No: 82.69%
  - Prefer Not answer: 1.92%
  - Yes: 15.38%

- **Black MSM**
  - No: 61.18%
  - Prefer Not answer: 5.26%
  - Yes: 33.55%

- **Hispanic MSM**
  - No: 82.35%
  - Prefer Not answer: 1.18%
  - Yes: 16.47%

- **White MSM**
  - No: 84.65%
  - Prefer Not answer: 0.75%
  - Yes: 14.61%
Self-perceived of Risk of Meningococcal Disease

### Risk Scale
- **0**: No risk
- **1-3**: Low Risk
- **4-6**: Medium Risk
- **7-10**: High Risk

### Percentages
- **Asian MSM**: High Risk: 8.77%, Low Risk: 17.54%, Medium Risk: 22.81%
- **Black MSM**: High Risk: 18.30%, Low Risk: 12.42%, Medium Risk: 38.56%
- **Hispanic MSM**: High Risk: 17.44%, Low Risk: 18.60%, Medium Risk: 39.14%
- **White MSM**: High Risk: 36.05%, Low Risk: 27.91%, Medium Risk: 44.76%

### Data
- **N=57**
- **N=153**
- **N=86**
- **N=677**

### Statistics
- **P<.0001**

Legend:
- **High Risk**
- **Low Risk**
- **Medium Risk**
- **No Risk**
Risk Factor Prevalence: Oral/Anal Sex in the past 30 days

*N Casual/Anonymous Sex: Sex with someone you don’t feel committed to or don’t know well

N = 949 - 1,023
Risk Factor Prevalence among Respondents (in the past 30 days)

- Shared Drinks at Bar/Clubs: 22.3% (5 or more times), 15.1% (2-4 times), 8.5% (1 time)
- Tobacco: 4.1% (5 or more times), 3.0% (2-4 times), 15.6% (1 time)
- Marijuana: 7.4% (5 or more times), 6.6% (2-4 times), 11.1% (1 time)
- Smoked Recreational drugs: 3.7% (5 or more times), 1.8% (2-4 times), 2.0% (1 time)
- Injected Recreational Drugs: 0.6% (5 or more times), 0.4% (2-4 times), 0.5% (1 time)
Venues where respondents solicit partners in the past 30 days (by Race)

<table>
<thead>
<tr>
<th></th>
<th>Other MSM</th>
<th>Black MSM</th>
<th>Others include: friends, home, park, events, adult book store, unspecified etc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dating App</td>
<td>29.1%</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Bar/Club/Party</td>
<td>14.8%</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>Bath House/ Sex</td>
<td>12.2%</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Other websites</td>
<td>7.8%</td>
<td>0.9%</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>4.0%</td>
<td>1.5%</td>
<td></td>
</tr>
</tbody>
</table>

N = 985  P<0.005
Commonly used Dating App/Website

<table>
<thead>
<tr>
<th></th>
<th>Other MSM</th>
<th>Black MSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grindr</td>
<td>50%</td>
<td>3%</td>
</tr>
<tr>
<td>Scruff</td>
<td>44%</td>
<td>2%</td>
</tr>
<tr>
<td>Adam4Adam</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>Growlr</td>
<td>11%</td>
<td>2%</td>
</tr>
<tr>
<td>Jack'd</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>BarebackRT</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>OkCupid</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>ManHunt</td>
<td>6%</td>
<td>1%</td>
</tr>
</tbody>
</table>

N=399
Summary 1

- Mean age was 42.9 years – comparable to mean age of cases 38.1 years
- Racial distribution of respondents similar to racial distribution of MSM in Illinois
  - Not comparable to racial distribution of outbreak cases - 85% are AA MSM
- Majority of respondents have at least a college education
- Respondents are more aware of the outbreak than the campaign
  - AA MSM and Age group 18-24 years were the least aware of the outbreak.
- Most common sources of information about the outbreak were TV news, Friends and Facebook
  - Predominant source of information about the outbreak for AA MSM is TV news
- Commonly accessed general sources of information were Chicago local TV news, Online News and Facebook
- Preferred method of learning about future campaigns were E-mail, Facebook, TV news and Doctor’s Office
Summary 2

- HIV prevalence comparable to existing HIV prevalence data within the MSM population
- Only 14% of respondents considered themselves as having high risk of getting meningococcal disease infection
- 46% and 31% of respondents had casual oral sex and anal sex with at least one partner respectively in the past 30 days before the survey
- 45.9% of respondents shared at least a drink at a bar/club in the past 30 days before the survey
  - Other risk factors are apparently low
- **Dating app is the most commonly use platform for soliciting partners**
  - Grindr and Scruff are the commonly used Apps
  - Jack’d is most popular app among MSM
Recommendations

- More efforts needed to increase awareness within AA MSM population.
- Targeted campaigns for age group 18-24 years.
  - Tend to practice more high risk behaviors
- Preferred method of learning about future campaigns were E-mail, Facebook, TV news and Doctor’s Office
  - Communications through healthcare provider should be intensified
  - CBOs should intensify campaigns through their Facebook group and Email Listserve
- Low risk perception within the community
  - Effective risk communication through all campaign platforms identified above
Acknowledgement

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- Robynn Leidig
- Andrew Beron
- Julia Latash
- CDPH Immunization Staff
- CDPH Communicable Disease Staff

COMMUNITY PARTNERS
- Howard Brown Health Center
- CORE center
- Southside Help Center
- Center on Halstead
- Northwestern Lakeview Clinic
- Komed Health Center
- COIP-University of Chicago
- And many others
Thank you