Social Media Monitoring in Public Health Emergencies Public Health Communications Webinar Series

July 24, 2019



Webinar Objectives

- Explore how to use social media to monitor and respond to the spread of (mis)information during public health emergencies
- Describe the importance of being aware of public sentiment during a public health emergency
- Identify how to use social media bidirectionally to both provide updates and collect public feedback
- Share scalable approaches for managing social media monitoring regardless of organizational budget



Agenda

- Social Media for Public Health Emergency Preparedness & Response
 - Tamer Hadi, Director of Strategic Technology, Office of Emergency Preparedness and Response, NYC Department of Health and Mental Hygiene
- · Q&A



Social Media for Public Health **Emergency Preparedness & Response**











Tamer Hadi

Director of Strategic Technology

Office of Emergency Preparedness and Response

NYC Department of Health and Mental Hygiene



@tamer hadi





OVERVIEW

PREPAREDNESS PHASE

- Establishing social media presence
- Social media promotion strategies

RESPONSE & RECOVERY PHASE

- Brief background
- Best Practices
- Free tools, trainings, resources
- Public health emergency case studies from NYC
 - Measles, Ebola, Legionnaires' Disease, Zika
- Current / Future Social Media Trends
- Discussion / Q&A





2017 NACCHO LHD Survey

Results

LHDs most commonly selected marketing, social media, website management, and brand management as top priorities for improvement.







JAN 2019

DIGITAL AROUND THE WORLD IN 2019

THE ESSENTIAL HEADLINE DATA YOU NEED TO LINDERSTAND GLOBAL MOBILE, INTERNET, AND SOCIAL MEDIA USE

TOTAL **POPULATION**

UNIQUE MOBILE USERS



INTERNET **USERS**



ACTIVE SOCIAL MEDIA USERS



MOBILE SOCIAL MEDIA USERS



7.676

BILLION

URBANISATION

56%

5.112

BILLION

PENETRATION:

67%

4.388

BILLION

PENETRATION:

57%

3.484

BILLION

PENETRATION:

45%



3.256

BILLION

PENETRATION:

42%







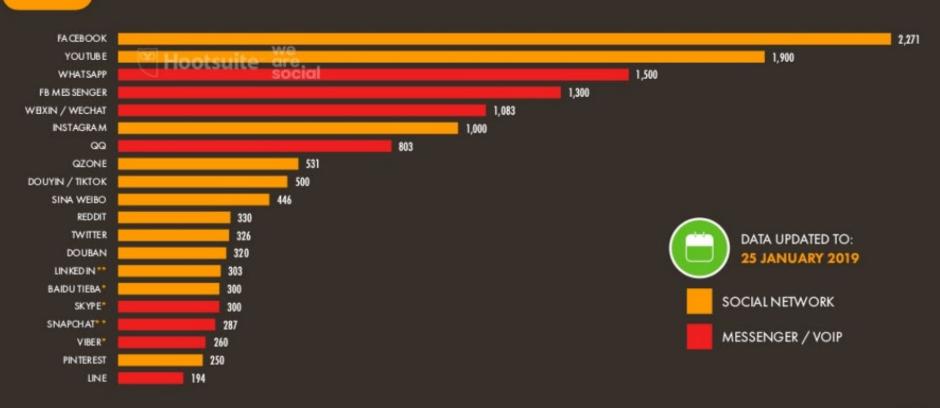




JAN 2019

SOCIAL PLATFORMS: ACTIVE USER ACCOUNTS

BASED ON MONTHLY ACTIVE USERS, USER ACCOUNTS, OR UNIQUE VISITORS TO EACH PLATFORM, IN MILLIONS





SOURCES: KEPIOS ANALYSIS; LATEST COMPANY EARNINGS RELEASES, PRESS RELEASES OR MEDIA STATEMENTS; REPORTS IN REPUTABLE MEDIA (ALL UP TO JAN 2019). *ADV ISO RY: PLATFORMS IDENTIFIED BY (*) HAVE NOT PUBLISHED UPDATED USER FIGURES IN THE PAST 12 MONTHS, SO FIGURES MAY BE LESS RELIABLE. **NOTES: THESE PLATFORMS DO NOT PUBLISH MALL DATA. LINKEDIN FIGURE IS BASED ON MONTHLY UNIQUE WEBSITE VISITORS IN DEC 2018, VIA SIMILARWEB. SNAP CHAT FIGURE EXTRAPOLATED FROM DATA REPORTED IN TECHCRUNCH (JUN 2017).









Public Health Emergency Preparedness and Response Capabilities











National Standards for State, Local, Tribal, and Territorial Public Health "social media" mentioned 24 times in 2018 update

 Only 5 times in 2011 version – all focused on outbound use

October 2018

Updated January 2019







FEMA National Incident Management System (NIMS)

Updated on October 17, 2017

Social Media

Social media presents unique considerations for incident management at all levels and provides a set of tools that can facilitate:

- · Monitoring and gathering information and firsthand accounts of incident impacts;
- Distributing public information and warning;
- · Producing maps and incident visualizations; and
- Matching available information, services, and resources to identified needs.

Using Social Media for Situational Awareness

Social media provides innovative ways of gathering data to achieve situational awareness. Monitoring of spikes or trends in social media by fusion centers, law enforcement, public health, or other information monitoring systems may enhance situational awareness or provide early indication of emerging issues. As with all data, incident personnel use data validation processes to filter and determine the accuracy of information gained via social media. Monitoring news and social media outlets helps identify rumors, inaccuracies, or information gaps. Important inaccuracies should be addressed before the media incorrectly reports them a second time.

 Media monitoring assesses the accuracy and content of news and social media reports and helps identify breaking issues and trends;

National Incident Management System

Using Social Media for Disseminating Information

Increasingly, the public expects incident management personnel to use social media to communicate necessary information. When using social media to disseminate information, considerations for incident managers include:

- Identifying the intended audiences and what types of information to share;
- · Determining if they wish to solicit feedback or responses; and
- The potential time delay before survivors receive the message.

These decisions help incident managers determine which social media platforms they should use, the frequency and configuration of messages, and assignments and staffing needs. As with other public information, personnel should follow standard release protocols and ensure accessibility. Advisory System (NTAS) facilitate communication with the public. Social media outlets are an important method of reaching the public directly; such outlets provide flexibility for targeting specific audiences or communicating when traditional media is unavailable, as in a power

The PIO performs a key public information-monitoring role by implementing measures for rumor control and monitoring/updating incident-related social media posts.





"The Case for the Social Media Coordinator"

Kristy Dalton (@kristydalton22) http://www.govtech.com/social/The-Case-for-the-Social-Media-Coordinator.html

"If you think managing social media just involves writing a few quick Tweets and Facebook posts every

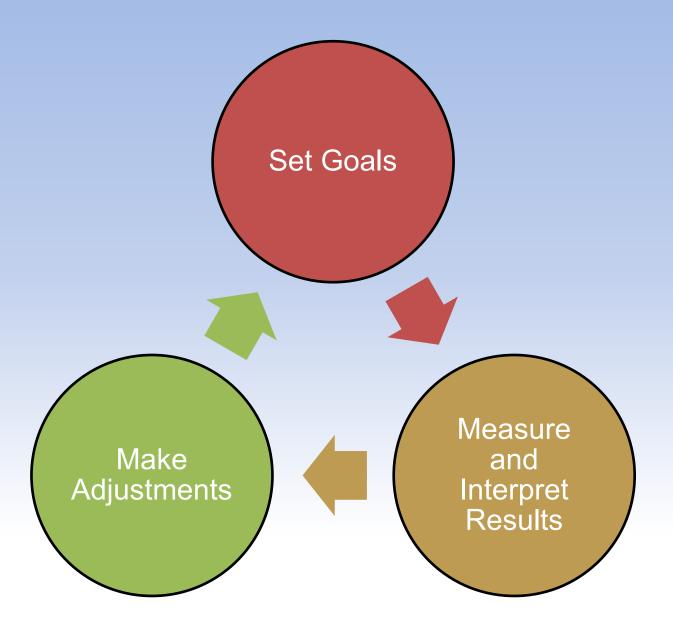
day - think again."

"Besides 'simply' writing content, the social media coordinator needs to manage citizen comments and complaints, analyze data, evaluate ads, train employees on the right way to use social media, create reports, work with video and graphics, and more."





Social Media Goals

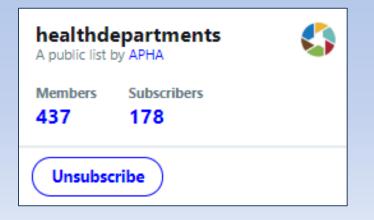






What are other Health Depts doing?









6 *FREE* Social Media Marketing & Promotion Strategies

- 1. Leverage existing agency social media accounts
- 2. Create/manage a profile for your top executive
- 3. Use live events to drive traffic to social media posts
- 4. Participate in national campaigns
 - e.g. September Preparedness Month, Hurricane Week, etc.
- 5. Target specific accounts and audiences using hashtags and mentions **
- 6. Participate in Twitter chats



Encourage Top Execs to Engage



Following

It has been an honor to lead emergency preparedness @nycHealthy for the past 16 years. I know the team will be in good hands with @BethMaldin as Acting Deputy Commissioner. I look forward to new challenges as VP for #PublicHealth and Strategic Operations @PPFA!



5 Retweets 43 Likes

17 5

Beth Maldin Morgenthau Followina @BethMaldin Thanks @Marisa_Raphael for 16 years of incredible leadership and best of luck in your new role @PPFA! The #PublicHealth #EmergencyPreparedness team at @nycHealthy will continue to build on your impactful efforts to protect the health of NYers, #FMGTwitter Marisa Raphael @marisa_raphael It has been an honor to lead emergency preparedness @nycHealthy for the past 16 years. I know the team will be in good hands with @BethMaldin as Acting Deputy Commissioner. I look forward to new challenges as VP for #PublicHealth and Strategic Operatio... 3:45 PM - 11 Jan 2019 4 Retweets 12 Likes 17 4



Examples of Leveraging Events

NACCHO Preparedness Summit (#Prep18)







Examples of Leveraging Events (2)

#Prep19







Tagging/Engaging Partner Agencies



Beth Maldin Morgenthau

@BethMaldin

Following

Thanks to @NYCHealthSystem, @GNYHA & all partners who participated in #SurgeExNYC today! This huge exercise involved 55 hospitals & 10 nursing homes & tested key capabilities, such as planning how to evacuate & transfer ~6,000 patients to facilities outside of evacuation zones.



Beth Maldin Morgenthau @BethMaldin · Feb 8

Thanks @PHEgov for organizing the recent workshop w/ NY stakeholders on planning for recovery from a bioincident like #Anthrax. Further strides in local planning to be continued by @nycHealthy, @EPA, & other partners that better equips NYC to recover from a #bioterrorist attack.



4:15 PM - 6 Mar 2019

6 Retweets 14 Likes



& ASPR and CDC Emergency



Participate in Twitter Chats

#PrepYourHealth

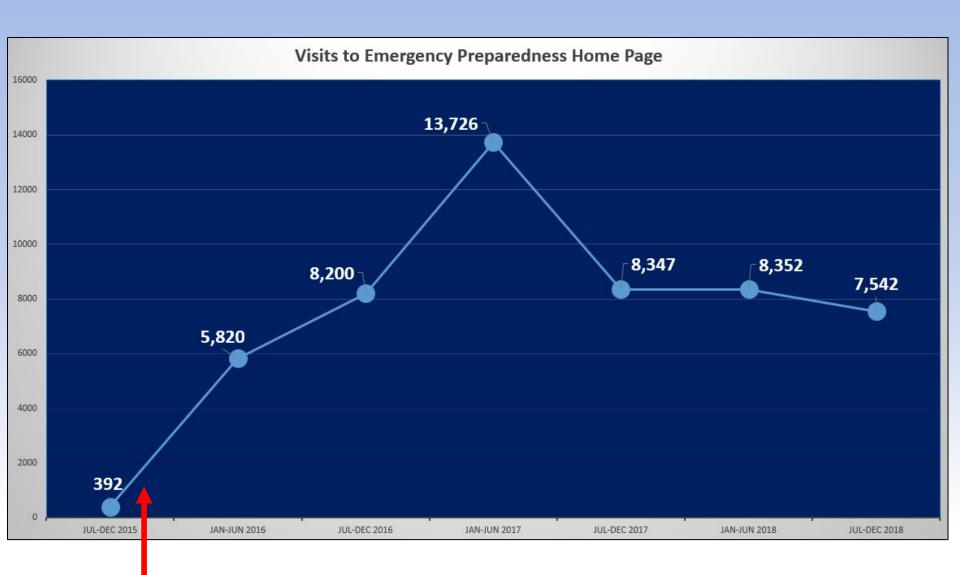






Evaluating Success

Website Metrics





Input from NACCHO Communications Committee Member

"Don't short-change the time used to discuss building your audience in peace-time. Being in a flooding emergency right now, I can tell you it was nice to have a base following already and to be known in the community to have active and timely information. We have become a big component of update distribution via social media for the response due to the peace-time focus."

- NACCHO Communications Committee Member





Encourage your agency to get VERIFIED



...WHEN THEY REACTIVATE THE PROGRAM





support.twitter.com/articles/20174...

5:31 PM - 15 Nov 2017

- Follower count doesn't matter
- Don't be discouraged by slow growth on Twitter





\$\$\$ Social Media Marketing & Promotion

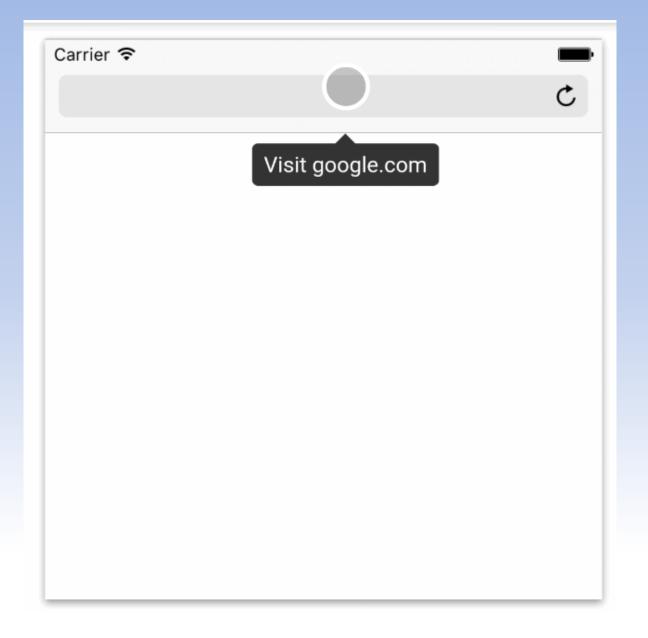
- FB ads
- Sponsored posts on Instagram
- Snap Ads
- Promoted Tweets
- Mobile Ad Networks
- Influencer Marketing
 - Micro-influencers > Celebrity Influencer

This can get very expensive, very fast





It's all about the content...and how it's presented







Tell Your Story



Website: www.PreparednessImpact.com

Communication Toolkit

Upcoming Events

Get Involved



Learn about the project's history, vision, mission, and target audiences.



Download and use available materials to educate, communicate, and motivate!

 \rightarrow

Take an inside peek at the state and local impact of preparedness efforts.



Log your educational outreach to improve future efforts.



There are numerous ways you can support the Preparedness Impact Project. Click to learn more!



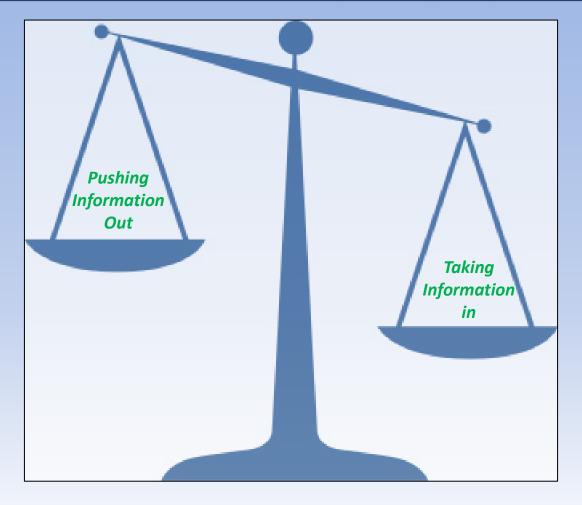


Social Media During a Public Health Emergency





Effective Use of Social Media During Emergency is Bidirectional



While outbound risk communication is critical...Listening is just as important!





Pushing Out Incident Information

1. Provide Public Situational Awareness

- What you know and do not know
- Control the story as quickly as possible

2. Build Public Credibility/Trust

Establish audience before emergency

3. Direct Engagement with the Community

- Two-way communication answering questions or addressing comments
- Ignore trolls, bots





Best Practices for Tweets

General Format

- Informational / Actionable Message
- 2) Link to more info
- 3) Hashtag
- 4) Picture / Video / GIF







Best Practices for Tweets: Threads



Commissioner Oxiris Barbot @ @NYCHealthCommr · Apr 9

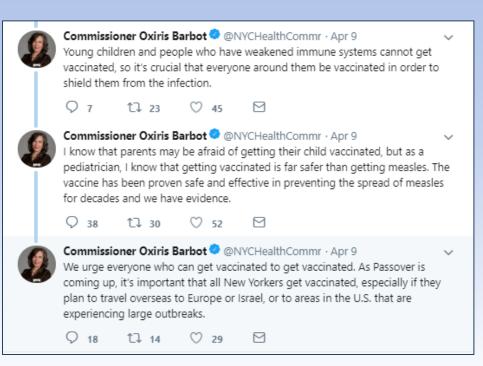
O 21

Q 11

17 8

dangerous misinformation being spread by a group of anti-vaxxers.

We've worked closely with the community, religious leaders, and schools to make sure vulnerable people are kept safe during this outbreak and to challenge the







Best Practices for Tweets:

Live Stream Press Conferences







During the incident...

1) Tell your audience to enable mobile notifications



2) Consider pinning latest and most important tweet / thread to your profile



3) Put the incident hashtag in your Profile Name and/or Bio to improve your agency's searchability







Tweet via SMS

Text 40404

How to post a Tweet via SMS

- First, make sure you've linked your phone to your Twitter account.
- Locate your Twitter short code. If you don't see your country on the list, we may not support your location or mobile carrier yet. We're working to support more every day.
- Once your phone is added, simply send a text message containing your Tweet to your short code.
- That's all you need to do! It will post as a Tweet to your Twitter profile.
- To check that your message posted to your Twitter profile, log in on the web and click on your profile. You should see your Tweet posted there.
- Use these designated Twitter SMS commands to perform even more actions from your Twitter account.





Facebook: Local Alerts



Road conditions are beginning to turn treacherous. We highly urge you to stay off the roads unless it's absolutely necessary. Road conditions will worsen as the storm intensifies overnight. Text CHARMECK to 888777 or go to charlottenc.gov for emergency updates. Charlotte Department of Transportation

NOTE: The video is a clip from the 10:30 a.m. press briefing held on Sept. 15, 2018. Follow our page for the latest updates on city services and public safety information.









■ Nextdoor Blog

Partnerships

Welcoming New York City Emergency Management to the Neighborhood

November 1, 2017

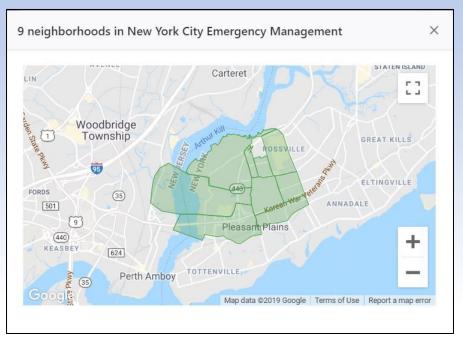


Written by Annie Barco

Today, we are excited to announce that New York City Emergency Management has partnered with Nextdoor to better connect and engage with New York City residents on a hyperlocal level.

NYC EMERGENCY MANAGEMENT Partners with Nextdoor, the Private Social Network for Neighborhoods

Partnership Allows Agency to Send Hyper-Local Updates to Residents on the Private Social Network







★ Nextdoor



NYC Department of Health and Mental Hygiene

Welcome to the New York City Department of Health and Mental Hygiene's home on Nextdoor! With an annual budget of \$1.6 billion and more than 6,000 employees throughout the five boroughs, we're one of the largest public health agencies in the world. We're also one of the nation's oldest public health agencies, with more than 200 years of leadership in the field. Every day, we protect and promote the health of 8 million diverse New Yorkers. Our work is broad-ranging. You see us in the inspection grades of dining establishments, the licenses dogs wear, the low- to no-cost health clinics in your neighborhood, and the birth certificates for our littlest New Yorkers. We're also behind the scenes with our disease detectives, investigating suspicious clusters of illness. Our epidemiologists study the patterns, causes and effects of health and disease conditions in New York City neighborhoods. These studies shape policy decisions and the City's health agenda. The challenges we face are many. They range from obesity, diabetes and heart disease to HIV/AIDS, tobacco addiction, substance abuse and the threat of bioterrorism. We're also working to address enduring gaps in health between white New Yorkers and communities of color. Structural racism is at the root of these health inequities, which is why the Department has made racial justice a priority. The New York City Health Department is tackling these issues with innovative policies and programs, and getting exceptional results.

Edit page description





Post a message, event, poll or urgent alert



News & Events, NYC Department of Health and Mental Hygiene AGENCY

Health Department to Conduct 1st Aerial Larviciding of Mosquito

To reduce mosquito activity and the risk of West Nile virus, the Health Department will conduct its first aerial larviciding treatment of the season to marshes and wetland areas of the Bronx, Brooklyn, Queens and Staten Island from Thursday, June 20 to Friday, June 21 and Monday, June 24 from 6 a.m. to 7 p.m., weather permitting.

The helicopter will treat only nonresidential areas. While three days are allotted for the aerial larviciding, the application may be completed in less time. In case of bad weather, application will be delayed until from Monday, June 24 to Wednesday, June 26, 2019 during the same hours.

The Health Department monitors mosquitoes that carry the West Nile virus. To date, no human cases of West Nile virus have been reported this season. During warm weather, mosquitoes can breed in any still water that has been standing for more than five days. In the targeted areas, existing hot and wet weather conditions can cause a rise in mosquito populations. Due to size and limited accessibility, these areas will be treated using a low-flying helicopter.

For the aerial application in marshes and wetland areas of the Bronx, Brooklyn, Queens and Staten Island, the Health Department will use environmentally friendly larvicides to kill young mosquitoes before they grow into adults. VectoBac ⊚ GS contains naturally occurring bacteria and will be used for this application. This product has been approved by the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation and will be used on mosquito breeding grounds throughout the mosquito season.

More info on this week's mosquito treatments: on.nyc.gov/mosquitoinfo

Planned Mosquito Aerial Larvicide Areas, June 20, 21 and 24 Staten Island, The Bronx, Queens and Brooklyn





18 Jun - Subscribers of NYC Department of Health and Mental Hygiene in 30 areas















- Create image of important info that can easily be shared on messaging apps
- Community

 partners can
 help initiate
 circulation

QUICK FACTS

FACT: Measles can be easily prevented with a safe vaccine.

FACT: Measles causes a fever and rash, but can also cause other health problems like pneumonia, seizures and infections of the brain, or death.

FACT: Measles can be serious for people of all ages. But infants and young children, expectant mothers, people with weakened immune system, and other people who are not immune to measles are most at risk.

FACT: If you choose not to vaccinate your child, you put other people's lives at risk.

A3Q

What is measles?

Measles is a virus that causes fever and rash; it can be deadly.

Who can get measles?

Anyone can get measles at any age.

How do you prevent measles?

- With a vaccine it's very safe and effective.
- Children typically get the vaccine after their first birthday. Two doses of the vaccine are needed before children enter school.
- During this outbreak, infants living in Williamsburg should also get an extra, early dose of the vaccine at 6 months for additional protection.
- Children in ZIP codes 11205, 11206, 11211 and 11249, cannot attend school without this vaccine.
- · Call 311 to find the vaccine near you today.

How is it spread?

- When someone with measles sneezes or coughs, people can breathe in the virus for up to two hours afterward and may get measles.
- Measles is very contagious if one person has it, 90% of the people around them will also get measles if they aren't vaccinated or immune.

What are the symptoms?

Symptoms include high fever, cough, runny nose, and red or watery eyes. A rash of red spots appears three to five days later. Measles can be spread up to four days before and after a rash appears.

How do you treat measles?

Measles cannot be treated with a specific medicine. Some symptoms — like fever — can be treated with medication.

Does the vaccine cause autism?

No. Scientific studies have proven there is no link between vaccines and autism.



For more information on measles, visit nyc.gov/health.



Social Media "Listening"

Why Should Public Health Be Doing This Again?

- Real-time situational awareness
- Get a feel for public sentiment and reaction to the incident
- Instant feedback on public messaging
 - → How well or poorly is the message resonating?
 - → Frequent questions?
 - → Informs future message development
- Identify and dispel rumors and misinformation
 - → Public and news media
 - → Ignore bots / trolls as much as possible
- Monitor agency reputation
 - → Opinions on agency response operations/services
 - → Threats to agency or staff





Public Health Issues to Listen for on Social Media

We are not 1st responders...

We can't respond to immediate life safety issues...

But every emergency has public health implications.

Flooding from Hurricane Harvey Causes a Host of Public Health Concerns

A lack of clean drinking water, the spread of disease and mosquito breeding grounds are just some of the potential problems

By Neil S. Grigg, The Conversation US on September 2, 2017

Medium to Long-Term Impacts

- Disruption of healthcare system access, including prescriptions/medicine
- Mental health issues including stress, depression and suicide
- Food safety and water access & contamination from waste/debris
- Increased risk of infectious diseases due to lack of safe water, hygiene, and sanitation (including in sheltering systems)







Purpose of Monitoring Social Media

Provide <u>relevant</u>, <u>verifiable</u> and <u>actionable</u> information to ICS Leadership

Social Media Monitoring Team (SMMT)

Trained agency staff mobilized during ICS activations to monitor social media in support of incident objectives.





Operationalizing SM Listening

Input User-Defined Search Parameters

(Topics, hashtags, people, events)



Analysis / Visualization Tools

(Filter, analyze for relevant info using software)



Human Analysis

(Validate and determine if info requires leadership attention)



Reporting

(Provide ICS Leadership reports in easily consumable format)





Planning Considerations

Building Social Media Monitoring Capacity

- Leadership Support
- Staff and Agency Resources
 - Social media accounts? Staff time?
- Team Structure and Protocols
 - ICS position? Communication? Reporting?
- Team Logistics
 - Software, hardware, physical space?





Leveraging External Support

Virtual Operations Support Team (VOST)

- Team of volunteers activated to perform specific functions using social media and online technologies to support an organization and/or jurisdiction
- VOST Team Leader reports directly to agency
- Ex: DOHMH trained group of NYC Medical Reserve Corp (MRC) to assist with monitoring and online activities, such as:
 - Be official message disseminators
 - Providing general awareness of sentiment and commentary by public
 - Identifying relevant mobilized organizations
 - Mapping specific incidents or calls for assistance





National / International VOSTS









Social Media Tools & Resources

FREE VS. PAID



Free "Listening" Tools

Twitter Advanced Search
TweetDeck / Hootsuite
Snapchat (Snap Maps)
GeoTweets

Free #SMEM Training/Resources

National Disaster Preparedness Training Center Courses

NLM Disaster Library Social Media Training

ASPR TRACIE Social Media Collection

DHS S&T Work Group Reports

Drexel University School of Public Health Social Media Library

Free Live Streaming Risk Communication Tools

Facebook Live
Twitter Live
YouTube Live





Twitter Advanced Search (BOOLEAN)

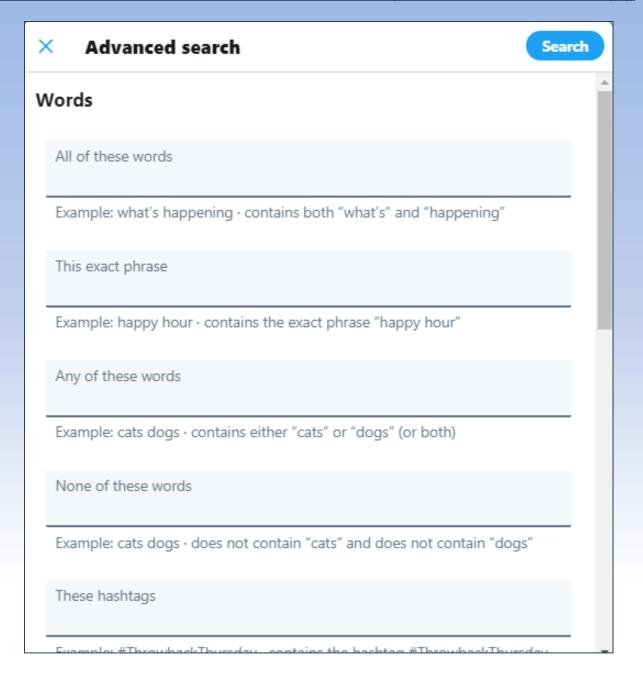


https://twitter.com/search-advanced





Twitter Advanced Search (Boolean Query)







Twitter Advanced Search (BOOLEAN)

(ebola OR #ebola OR #ebolavirus OR #stopebola OR #EbolainNYC) AND ("new york" OR "new york city" OR NY OR NYC OR Brooklyn OR Queens OR Bronx OR Manhattan OR "Staten Island" OR SI OR BK OR BX OR astoria)

zika OR #zika OR #zikavirus OR #virusdelzika near:"Queens, NY" within:15mi

"legionella" OR "legionella" OR "legionnaire" OR "legionnaires" OR "legionnaires" OR "legionnaires" OR "#Legionnaires" OR "#Legionnaires" OR "#Legionnaires" OR "legionnaires" OR "#Legionnaires" OR "legionnaires" OR "legionnaires" OR "#Legionnaires" OR "legionnaires" OR "#Legionnaires" OR "legionnaires" OR "#Legionnaires" OR "#Le

(nycdohmh OR "nyc dohmh" OR "nyc doh" OR dohmh OR nychealth OR ((nyc OR "new york city") AND ("health dept" OR "health department" OR "department of health" OR "dept of health" OR "doh")))

measles OR #measles OR #measlesoutbreak near:"Brooklyn, NY" within:15mi since:2019-04-09







Vs.



*** For Monitoring ***





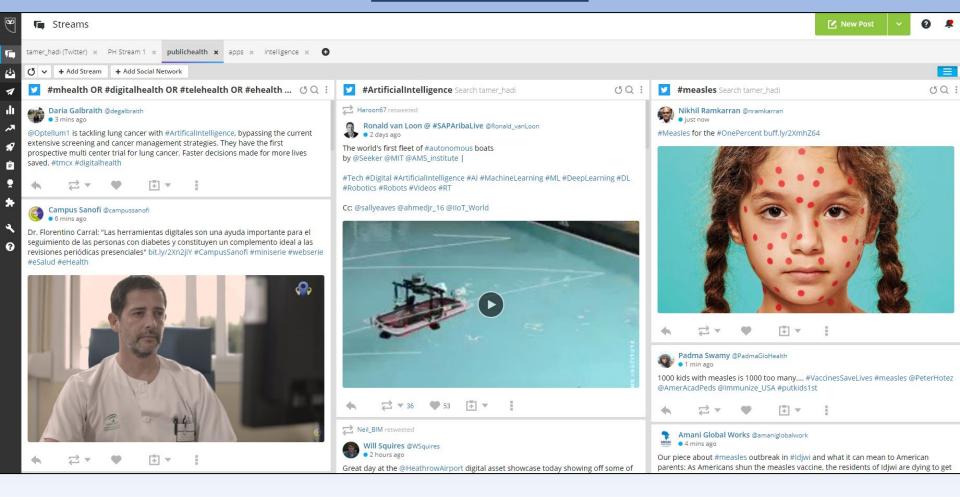
Tweetdeck







Hootsuite



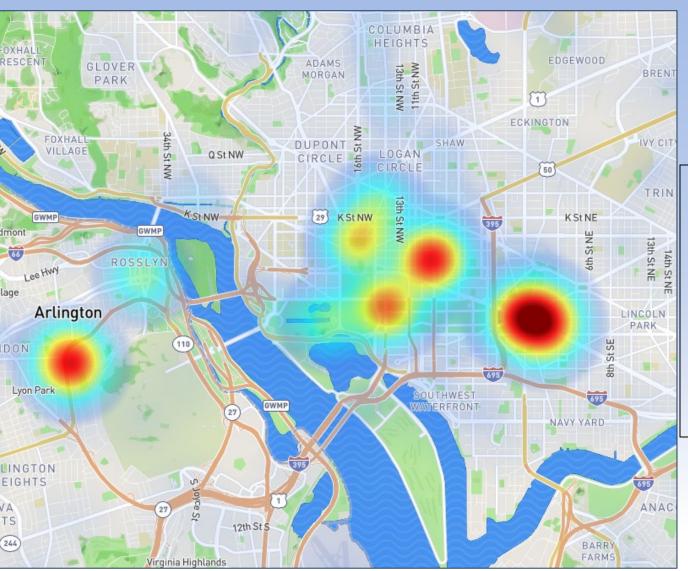
Main advantages:

- Multiple platforms
- 3rd party apps integration



Snapchat Maps (Snap Maps)

https://map.snapchat.com/

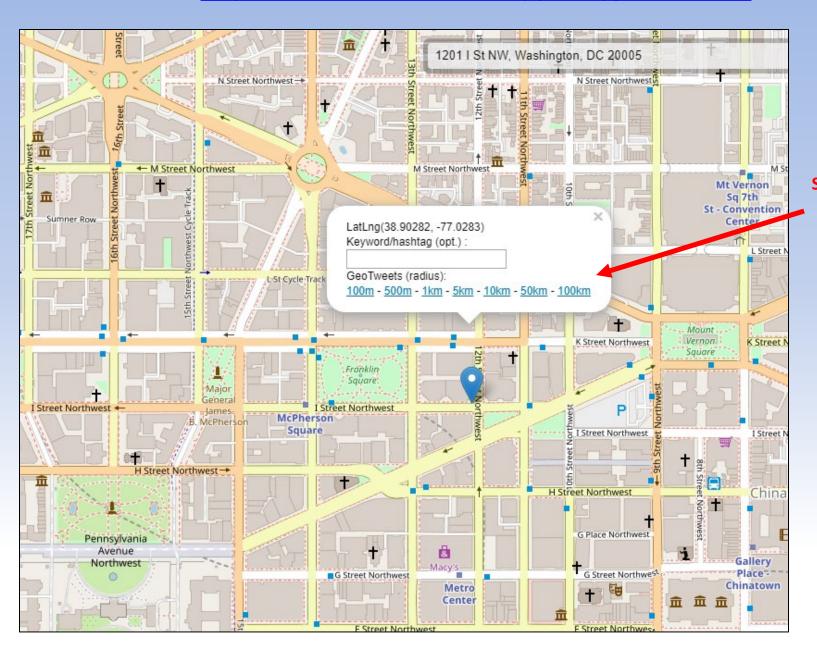


- Released Feb 2018
- Mobile or Desktop browser
- No account needed to view
- Curated by Snapchat
- Only users who elect to be public



Easy GeoTweets

https://www.i-resilience.fr/app/easygeotweets/#



Select radius for geofence





Visualizing / Curating Flagged Content





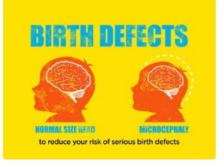
Legionnaires' disease June 2017

15 items



H7N2 virus

34 items



SMMT - Zika as of October 28

11 items





SMMT_Zika as of October 11



SMMT Zika as of October 6

Zika can be transmitted sexually

The NYC is running a campaign to
educate about the spread of Zika

It will include content to educate about
the sexual transmission of the virus

People who travel to

Few people know that

SMMT Zika as of Oct. 3

13 items



17 items

0

3 items



If you have some \$\$\$\$









Resources/Training (1)



All FEMA accredited courses



Social Media for Natural Disaster Response and Recovery (PER-304)



Social Media Engagement Strategies (PER-343)



Social Media Tools and Techniques (PER-344)



Resources/Training (2)





Disaster Information MANAGEMENT RESEARCH CENTER

Social Media Analysis During Disasters

https://sis.nlm.nih.gov/dis courses/social-media/index.html#One

Now that you have completed this course, you should be able to:

- Develop a plan for monitoring social media for disaster information
- Monitor social media for actionable information during disasters
- Choose reliable social media sources and use a checklist to verify content.
- Practice techniques to lessen uncertainty and information overload

Many links to other great courses within



Resources/Training (3)

https://asprtracie.hhs.gov/technical-resources/73/social-media-in-emncy-response/60



Hadi, T. and Fleshler, K. (2016). Integrating Social Media Monitoring Into Public Health Emergency Response Operations. Disaster Medicine and Public Health Preparedness. 1-6.

The authors describe how they used social media monitoring during public health emergency responses in New York City, including Ebola and Legionnaire's responses and for planned events. They offer concepts and implementations that can be applied to other agencies who want to build a social media monitoring team.

Hadi, T., MacGregor, J., and Lauren, M. (2017). Social Media Monitoring: 2016 Zika Response in NYC. Health Security. Health Security. 15(4).

This article highlights how the New York City Social Media Monitoring Team (SMMT) coordinated the 2016 Zika planning and response efforts. The authors encourage local health departments leading or supporting emergency response to dedicate staff to monitoring social media to improve real-time situational awareness and understanding of public perception.







Countering False Information on Social Media in Disasters and Emergencies

Social Media Working Group for Emergency Services and Disaster Management

March 2018



Resources/Training (4)

Examples of best practices include:

- Establishing partnerships w/ local media outlets before disasters
- Using the Joint Information
 System to coordinate public info
 efforts of multiple jurisdictions /
 agencies
- Setting up a central website to debunk bad information

OLDER REPORTS

- Best Practices for Incorporating Social Media into Exercises - March 2017
- From Concept to
 Reality: Operationalizing Social Media for
 Preparedness, Response and Recovery April
 2016
- Using Social Media for Enhanced Situational Awareness and Decision Support – June 2014
- Lessons Learned: Social Media and Hurricane Sandy – June 2013
- Community Engagement and Social Media Best Practices – September 2012
- Next Steps: Social Media for Emergency Response – January 2012
- Social Media Strategy January 2012





Resources/Training (5)



Center for Public Health Readiness and Communication

SOCIAL MEDIA MESSAGE LIBRARY

CATEGORIES

- Natural Disasters
- Infectious Disease
- Accidental Disasters
- Intentional Disasters
- Individuals with Access & Functional Needs

http://drexel.edu/dornsife/research/centers-programs-projects/center-for-public-health-readiness-communication/social-media-library/



Useful Hashtags

- #SMEM
- #GSMChat
- #EMGtwitter





NOT Covered in Depth Today

Initial Risk Communication on Social Media

- Strategies / best practices <u>during</u> emergency, such as:
 - Frequent updates (photos & live video when possible) on what you know and don't know
 - Clear, concise and specific actionable messages
- FEMA #PrepTalk
- Recommend looking into CDC CERC Program
- Multi-day training topic for PIOs

CDC's CERC Program—Principles to communicate by in an emergency response and everyday life







Also NOT Covered (1)

Verification Tips/Tricks

HOW TO SPOT FAKE NEWS



CONSIDER THE SOURCE

Click away from the story to investigate the site, its mission and its contact info.



CHECK THE AUTHOR

Do a quick search on the author. Are they credible? Are they real?



CHECK THE DATE

Reposting old news stories doesn't mean they're relevant to current events.



CHECK YOUR BIASES

Consider if your own beliefs could affect your judgement.



READ BEYOND

Headlines can be outrageous in an effort to get clicks. What's the whole story?



SUPPORTING SOURCES?

Click on those links. Determine if the info given actually supports the story.



IS IT A JOKE?

If it is too outlandish, it might be satire. Research the site and author to be sure.



ASK THE EXPERTS

Ask a librarian, or consult a fact-checking site.

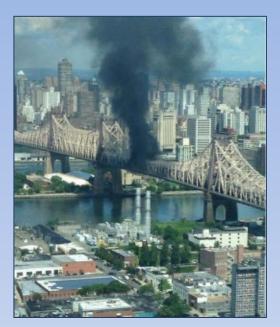


International Federation of Library Associations and Institution





Situational Awareness





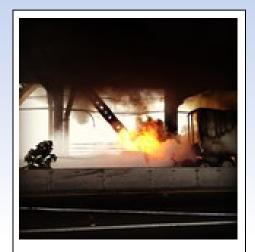




There's a freakin truck on fire on the Queensborough bridge! Omg!



#not a good time to be on the Queensborough bridge



#queensboro #bridge #fire #blast #flames #pyro #wtf #queens #nyc





Fake Imagery – Classics from Sandy 2012











Fake Imagery – Harvey 2017



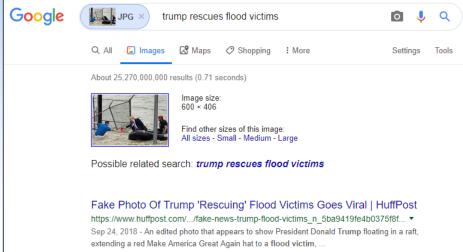


Reverse Image Searches



Tweetdeck







Recognizing Bots / Troll / Parody Accounts



way affiliated w/ Donald Trump*...















Identifying / Recognizing Twitter Bot Accounts

Twitter Bot → Account run by software, programmed to automatically do certain activities

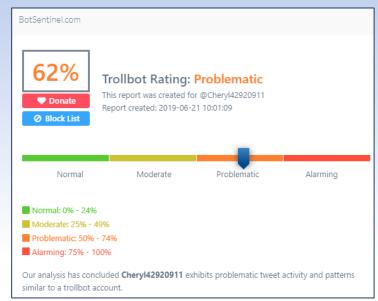
- High Activity
- No profile pic or background
- Very few tweets and/or tweets with extremely high RTs
- Strange name or handle with jumbled letters/numbers
- Joined Twitter relatively recently

e.g. a typical reply to a measles tweet



Tweets Following Followers 205 156 19.4K 20.1K Tweets & replies Tweets Media Chervl Cheryl Retweeted @Cheryl42920911 Katie Hopkins @ @KTHopkins · 13h III Joined July 2018 Super excited to be headed to D.C. and Trump

Tool confirms







Bot Analysis Tools

https://botsentinel.com/

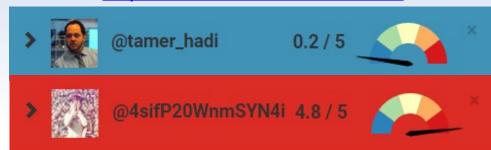


https://botcheck.me/





https://botometer.iuni.iu.edu/







- Measles (2019)
- Ebola (2014)
- · Legionnaires' Disease (2016)
- Zika (2017)





Measles Outbreak in NYC







TOGETHER WE CAN STOP



Measles Outbreak Overview

- Outbreak began in October 2018 with 6 cases
- April 9, 2019 Declared Public Health Emergency (285 cases)
 - Health Commissioner ordered every adult/child who lives, works or resides in 4 ZIP codes and has not MMR vaccine to be vaccinated
 - Activated ICS and Social Media Monitoring Team

Objectives:

- Case Investigations
- Program Audits / Closure (day cares, schools, summer camps)
- Individual Notices of Violation
- Public messaging
- Community engagement

○ As of 6/24:

- o 609 cases
- 29,220 MMR vaccinations





Commissioner Oxiris Barbot @ @NYCHealthCommr · May 15

Dangerous misinformation is spreading about NYC's #measles outbreak. Let me reiterate the facts:

- Immigrants are NOT spreading measles.
- Vaccines are SAFE and effective. They do NOT cause autism.
- Measles is a serious illness that can be prevented. on.nyc.gov/2VXm17R







nycHealthy @ @nycHealthy . Jun 4

Planning to travel internationally this summer? Make sure you and you're family are vaccinated against #measles. Even infants 6 months through 11 months should receive one dose of the MMR vaccine: on.nyc.gov/measles













nycHealthy @ @nycHealthy · May 16

Symptoms of #measles include high fever, cough, runny nose, and red or watery eyes. A rash of red spots appears three to five days later. If you see symptoms, call your health care provider right away: on.nyc.gov/measles





Commissioner Oxiris Barbot @ @NYCHealthCommr · Jun 17

New **#measles** cases: As of today, @nycHealthy has confirmed 596 cases since the outbreak began in October. To end this outbreak, we have to keep reiterating the truth: The MMR vaccine is safe and effective. It does not cause autism. More: on.nyc.gov/measles







Announcing Public Health Emergency



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This Tweet is unavailable	

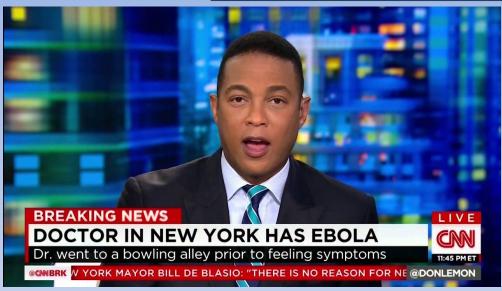


Measles Issues Observed Online

- Blaming outbreak on illegal immigration / sanctuary city of NYC
- Conspiracy with "big pharma" to make money on MMR vaccines
- Typical anti-vaccine myths:
 - Linked to autism
 - "Poisonous" chemical additives: mercury, aluminum and formaldehyde
 - Disbelief that these illnesses exist and/or not that dangerous
 - The existence of the National Vaccine Injury Compensation Program (VICP)
 - Harsh side effects of vaccines
- Blaming hipsters and gentrification of Williamsburg
- Train/subway safety concerns about riding train with infants under 1 who cannot be vaccinated yet
- Public not always clear where to get free/low-cost vaccines



Ebola Case in NYC (10/23/2014)









Timeline of Significant Ebola Events in USA

Orange Dates = NYC Events

- 07/31/14 News that 2 Americans w/ Ebola to be transferred to Emory from Liberia
- 08/01/14 NYC DOHMH conducts largest no-notice POD full-scale exercise in NYC History
- 08/05/14 NYC begins Ebola preparedness meetings
- 09/30/14 Dallas patient with confirmed Ebola
- 10/03/14 NYC DOHMH officially activates ICS
 - Social Media Monitoring officially begins
- 10/08/14 Dallas Patient dies in hospital
- 10/12/14 Nurse 1 confirmed Ebola
- 10/15/14 Nurse 2 confirmed Ebola
- 10/23/14 NYC Case confirmed
- 11/11/14 NYC Patient Discharged
 - Over 1 year later
- 12/29/15 Active Monitoring Call Center Shutdown
 - 5791 people monitored
- 02/02/16 NYC DOHMH deactivates for Ebola
 - 1 year, 3 months, 30 days



07/31/14 - 2 Americans w/ Ebola transferred to Emory

08/01/14 - NYC DOHMH conducts largest mass prophylaxis full scale exercise in NYC History (#RAMPEX)









News Coverage on Exercise











Government Conspiracy???



B4IN Featured @b4infeatured

What Are the Odds: NYC Tests Patient for Ebola just Days after Largest Bio Attack Drill in City History b4in.com/rE6l



MSGU BOT @msgubot

YTB #ebola bit.ly/1xZ6kWH EBOLA VIRUS: NYC tests for new unconfirmed cases after RAMPex drill



Brooks A. Mick @sailfree

@politico DOZENS FROM EBOLA-STRUCK COUNTRIES CAUGHT SNEAKING INTO USA--headline. NYC just held a massive exercise? Do they know something?



Epidemie News @Virus Batteri · 4 Aug 2014

EBOLA VIRUS: NYC tests for new unconfirmed cases after RAMPex drill: 7online.com/health/mount-s..... bit.ly/1xZ3zoe

Supposedly, the drill was for <u>airborne</u> bioweapons such as Anthrax, however, one must question if the true nature of the drill was based on the recent Ebola outbreak which has already killed over 750 people in West Africa and prompted door-to-door sweeps.

newsworld @NewsyNewsworld · 1 Aug 2014

New York City holding sudden mass drill today, distributing emergency supplies. Ebola outbreak practice? via /r/... ift.tt/1nRIPOb



Enigma @ElWhiskyMono · 1 Aug 2014

NYC has largest emergency medical drill in it's history & Obama signs Executive Order to quarantine people and Ebola patients coming to US.



Lap Dog @chliberty · 1 Aug 2014

False Flags come via 'drills.' Obama will use this to disappear ppl.. Massive emergency drill in New York City In.is/www.myfoxny.co... #Oip



August - October 2014 → Plenty of False Alarms



Mount Sinai patient with high fever and gastrointestinal symptoms being tested for Ebola #BREAKING 7ny.tv/1p5waro



Sarah Cordelia @sarah_cordelia

aright well an ebola patient has been ADMITTED TO MOUNT SINAI aka MY PLACE OF WORK today so goodbye cruel world i shall miss you





Mike Hollan @mike_hollan

I'm not worried about #Ebola because I ride the NYC Subway everyday, and there's shit down they aint even got a name for yet.





No Shortage of Scares....





Psychic ???



Cruella de Vil @ @larenaghost



mmm NYC subway and I can smell the Ebola in the air

2:07 PM - 22 Oct 2014







The Very Next Day....



Ebola Case in NYC (10/23/2014)











Overall NYC Ebola Summary

- DOHMH Led, Large & Resource-Intensive Interagency Response
 - 25 city, state, federal agencies
 - 1000+ DOHMH staff and 500+ MRC volunteers
 - Cost exceeding \$6.5M (\$23M citywide)
- Coordinated NYC hospitals to identify and isolate potential EVD cases and worked w/ 5 hospitals to ready treatment centers
- Conducted extensive epidemiologic investigations with rapid laboratory diagnostics for potential EVD cases in NYC.
 - 12 EVD tests performed, 88 Persons Under Investigation.
- Developed active monitoring call center
 - 5800+ travelers via JFK
 - 114 healthcare workers
 - Quarantined 3 case contacts for 21 days.
- Created and distributed culturally sensitive material
 - 100,000+ "Am I at Risk?" palm cards (9 languages)
 - Utilized Community Outreach Teams to canvass 14 neighborhoods
 - Conducted 116 community engagement and education events.



DAY 1: 10/23/14

Notification: Patient called MSF → MSF called DOHMH

DOHMH coordinated w/ FDNY-EMS & Bellevue Hospital for safe/rapid transportation w/ minimum exposure to others

Case Investigation and Contract Tracing:

- Interviewed patient by phone before EMS transfer
- Began contact tracing while patient en route to hospital

Lab Testing:

- DOHMH staff at Bellevue assisted w/ packing and transporting
- Test results returned ~3 hours after specimen received

Press Conference at 6:30pm Confirming Case



*** CRITICAL SOCIAL MEDIA DISCOVERY ***

- Patient information leaked from interagency conference call!
- Discovered by Social Media Monitoring Team immediately
 - Reported to PIO and Incident Commander
- Prior to official press conference planned for 6:30pm
- Prior to confirmation of lab results
- Changed approach to press conference and preparing Commissioner talking points
- Required immediate risk communication and community engagement





1st Article Leaking Info @ 2:44pm













NEWS

Doctor who treated Ebola patients rushed to NYC hospital

By Jamle Schram, Frank Rosarlo and Shawn Cohen

October 23, 2014 2:44pm



Dr. Craig Spencer recently returned from Guinea where he was treating patients with Ebola.





1st Tweet @ 2:51pm







1st Time Patient Name Appeared in Tweet @ 3:03pm







ONLINE MADNESS ENSUES

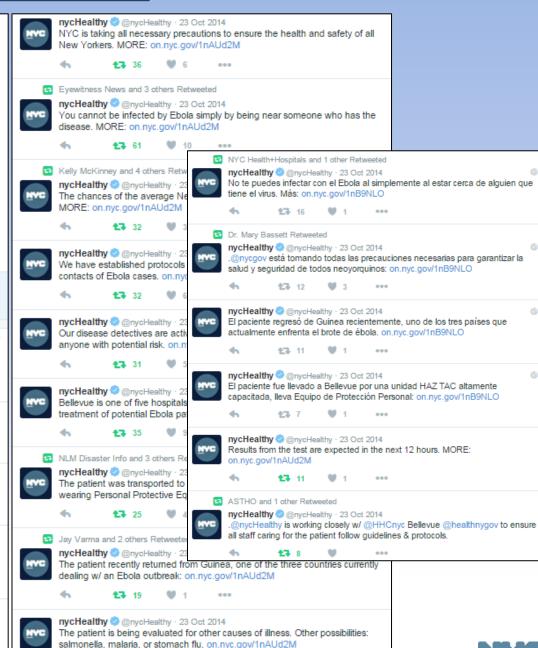






Agency Response on Twitter - ~40 mins after leak reported







Initial Leak Caused Lots of Misinformation and Panic

Press Reported Wrong Bowling Alley!



Stephanie Guerami @sgdahi · 23 Oct 2014

Does @CNN realize that they keep showing footage of the @BrooklynBowl instead of @TheGutter as they report this #Ebola case? #NotTheSame



Matt Quering and 53 others follow



Michael Calderone @ @mlcalderone · 23 Oct 2014

Doctor with Ebola was reportedly at The Gutter and Brooklyn Bowl last night:
nydn.us/1tOJZib



Kurt McRobert @KurtMcRobert · 23 Oct 2014

The uber Ebola guy went to Brooklyn Bowl last night so now Gutter is closed tonight #absurd #williamsburg







Cleaned & Re-Opened Bowling Alley

"We cleaned every square inch of the place - every hole in every bowling ball" said Sal Pain, Bio-Recovery's chief safety officer.



Matt Tomlin @TomlinM



New York City Health Dept spokesman tells international media mob that the Gutter bowling alley is safe. #Ebola

12:41 PM - 24 Oct 2014 · Brooklyn, NY, United States



L 5







Subway Hysteria





Hootsuite follows

Max Rasbold-Gabbard @mrasboldgabbard · 24 Oct 2014 For those New Yorkers wondering: Did I catch Ebola on a subway? buff.lv/12aaXcw



Feeling sick?

- · Did you recently return from Africa?
- · Have you exchanged bodily fluids with Ebola patients?
- · Did you inexplicably lick the subway pole that Dr. Craig Spencer used?

Did you answer "no" to those three questions?

Then you probably don't have Ebola.

graphic by MTA / @ddiamond

Take care.

Did you catch Ebola on a subway? A quick quiz.

Did you inexplicably lick the subway poles that Dr. Craig Spencer used? That may have been a bad idea.

vox.com

RhinoFan App and 7 others follow

Steven Bertoni @ @StevenBertoni · 24 Oct 2014

Does this mean I can leave my rubber gloves at home? Why You Won't Catch Ebola On The New York City Subway onforb.es/10gZzn7 @forbes



Why You Won't Catch Ebola On The New York City Subway

Ebola has come to New York City. A heroic physician who returned to the city last Friday after treating patients in Guinea with Médecins Sans Fronti... forbes.com



Susan Bennett and 44 others follow

Sally Kohn @ @sallykohn · 23 Oct 2014

In fairness, New Yorkers have reason to be a tad more freaked out about #Ebola. A lot of fluid exchanging happens on the subway....



43 4

Johana Bhuiyan and 9 others follow



Alex Goldmark @ @alexgoldmark · 24 Oct 2014

Ebola on the NYC subway? A FAQ bit.ly/1sfwAZ6 @TransportNation lookin out



Ebola on the Subway? Here's Your FAQ

You avoid grabbing the pole. You use hand sanitizer liberally. But should you worry about Ebola underground?

wnyc.org





Lots of Great Subway Advice Too!



"If you come across some strange mucus or feces or something out there...on the subway, on the street or somewhere else...don't eat it."



Cab / Uber Hysteria



Matt Soleyn @MattSoleyn · 23 Oct 2014

CNN reporting Dr. Craig Spencer took **Uber** to **get** to **#Brooklyn**, in contrast to reports saying he took the subway. **#Ebola #NYC**





Nathaniel E. Baker @natbaker · 23 Oct 2014

Okay, so if I don't take @Uber I have no chance of getting Ebola? Did I get that



Josh Barro 📀 @jbarro · 23 Oct 2014

Remember: It's impossible to get Ebola from an Uber that has at least 4.7 stars.



17 49





Kashif Osman @WizKashifa · 23 Oct 2014

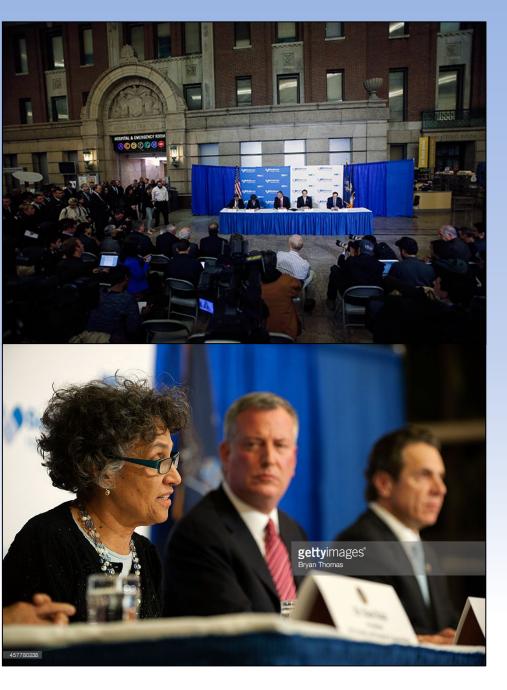
You're more likely to **get** hit with a hammer by your **Uber** driver than to catch **Ebola** from sitting in an **Ebola** infected **Uber**.



baby huey @shelz on chill · 23 Oct 2014

Son took the subway from Harlem to Brooklyn . . . and went back in an Uber? WITH EBOLA!?





1st Press Conference





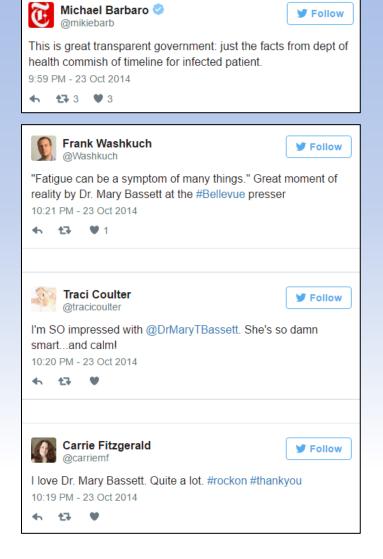


Mayor de Blasio: confirmed case of Ebola in NYC. 9:49 PM - 23 Oct 2014 · Manhattan, NY, United States



Public Sentiment on Press Conference

Positive

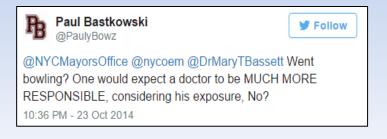


Negative





Dr. Mary Travis Bassett: "The Dr. with Ebola did a fabulous job of isolating himself." I guess going bowling and mass transit is fabulous.





SM SitRep Summary Day 1 (10/23)

Mixed accounts of patient's timeline in media:

- Reports he came back 10 days ago actually 7 (10/17)
- Most sources initially reported "Brooklyn Bowl "not "The Gutter".
- Initial reports he took Uber to Brooklyn instead of back from Brooklyn.
- Details around subway travel emerged later on; initial reports focused on the cab ride
- Residents of Harlem and Williamsburg expressed increased concern and panic about having been in close proximity to the patient.
- Many jokes around bowling and Ebola, humorous scenarios related to getting Ebola from bowling, and hipster-related jokes
- Viewers of the press conference found Dr. Bassett calming, reassuring, and authoritative
- Continues to be criticism around her statement that the patient was self-quarantining.



Day 2

We get a clearer picture of patient activities and share them at 2nd Press Conference

Oct 21 – No symptoms – felt fatigued, but no fever

- Visited "The Meatball Shop" Restaurant
- "Blue Bottle" Coffee Shop on High Line
- 1 Train Home to Harlem

Oct 22 – No symptoms – felt fatigued, but no fever

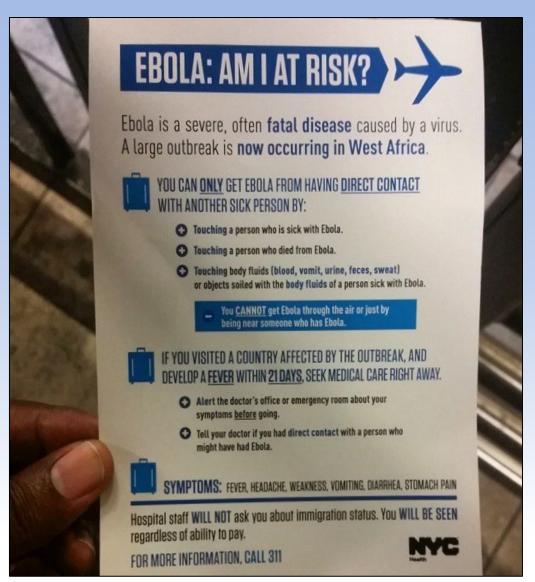
- Jogged 3 miles in W. Harlem neighborhood
- Took A and L Train lines to Williamsburg, Brooklyn Bowling Alley
- Took Uber home

Oct 23 – Low-grade fever

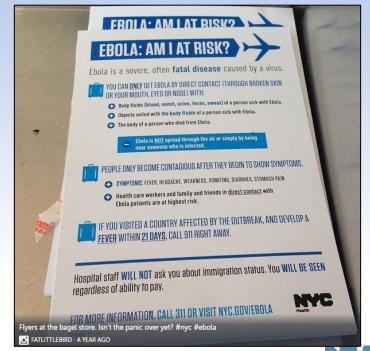
Fever → Called MSF → DOHMH Notified



Community Outreach Teams













Bill de Blasio @BilldeBlasio

Follow

Enjoyed a great lunch @MEATBALLERS yesterday with @Chirlane and @DrMaryTBassett.

12:54 PM - 26 Oct 2014







HuffPost Politics @ @HuffPostPol : 25 Oct 2014 Bill de Blasio dines at the Meatball Shop to calm Ebola fears huff.to/1taiDBe



NYC Mayor Eats At Same Restaurant As Ebola Patient To Calm City's... New York Mayor Bill de Blasio ate lunch at The Meatball Shop in Manhattan's Greenwich Village Saturday, four days after Ebola patient Dr... huffingtonpost.com

DAY 3 and Weeks Later



howard wolfson @howiewolf





She has been terrific @NYTMetro: Commish @DrMaryTBassett has helped quell Ebola fears as NYC reassurer-in-chief nyti.ms/1oH4afY"

1:57 PM - 25 Oct 2014



NYC Health Commissioner Has Helped Que...

Thrust into the limelight, the health commissioner, Dr. Mary Travis Bassett, has proved a calming presence as the city grapples nytimes.com



4 15







.@DrMaryTBassett's Ebola presser makes @LastWeekTonight





Last Week Tonight – John Oliver

Episode from 10/26/14



https://www.youtube.com/watch?v=kppVuXppaJs



Misinformation on Ebola Cures / Prevention

Marijuana cures Ebola?



CEO @SlassyStudio · 5 Nov 2014 Doctor Suggests That Marijuana Can Protect You From Ebola topinfopost.com/2014/10/20/mar...



Naloxone Project @Sivana_Project · 21 Oct 2014

\'Marijuana Cures Ebola\' Claim Investigated: Cannabis Researchers Weigh In - International Business Times au.ibtimes.com/articles/57020...

Garcinia Kola (Nut)?



Vinnie Klemer @VinKlem · 27 Oct 2014

The cure for **Ebola** has already been discovered its call garginia **kola**. Look it up! They don't want the mass populace to know this. #lookitup



@LaurenJaurequi #votefiftharmony I'LL GIVE YOU SOME BLESSED ANT

BLESSED

ANTI-EBOLA

SALT

CHINEKE PUNISH EBOLA.

sleeping ghost @Bourgeoisie187 · 27 Oct 2014

The cure for **Ebola** is a nut called Gamica **Kola**. So everybody can stop being paranoid and behaving stupid.

Bathing / Drinking Salt Water?



OhLooWahPheemi @Olufemi_Whit · 4 Nov 2014

All you have to do is drink 2 buckets of **salt water** "@Gidiboy2013: **Ebola!!!!!!!** I'm too young to die abeg"@Olufemi_Whit: @Gidiboy2013 kenya"



@@® @arosso77 · 2 Nov 2014

My friend said that when she was in Nigeria, her mom made her bathe in and drink salt water because she believed it would prevent Ebola

Nano-Silver?



James Russell Kalles @JimKalles · 5 Nov 2014

Nano-silver kills Ebola, Get some Silver nitrate it mat just save your life down the road.. They don't want us to know the cures..



Mark Realmz @_ReaLmz_ · 25 Oct 2014

#NANO SILVER IS A #NATURAL CURE, SCREW WHAT THE FDA SAYS ABOUT #EBOLA CURES THEIR VACCINE IS POISON THAT HAS MICRO RFID CHIPS IN IT! #WORLD





Ebola Summary

Social media monitoring creates awareness amongst agency leadership for what most concerns the public

Helps leadership create strong messaging

Lots of repetition to battle rumors / misinformation / confusion

Cannot eliminate misinformation – can focus on what is most prevalent and address in public messaging

Social media summaries / stats included in Situational Reports







Max Silvestri 📀 @maxsilvestri



The scariest part of this whole thing is that this is my good luck move when I bowl.

9:36 PM - 23 Oct 2014



★ ★→ 144 ♥ 210



Ebola Humor



Joel Pavelski





This Ebola doctor visited more places in NYC while in "self isolation" than I ever have on a Saturday when I'm feeling energetic 10:29 PM - 23 Oct 2014











🖊 🚮 Alex Baze

@bazecraze



EBoLa does sound like a hot NYC neighborhood. East of Bowery and LaFayette?

10:27 PM - 23 Oct 2014











Chef Harri\$on @chef harrison · 24 Oct 2014

Craig Spencer tested positive for Ebola, but the "copious amounts of diarrhea" actually came from his meal at The Meatball Shop restaurant.











Aris Pina @PunchZoneAris · 23 Oct 2014

So this morning I sneezed on the subway and 2 ladies gave me the "Ebola eye" and scurried away from me. Highlight of my day #Ebola #NYC







000



Sexy Ebola Nurse Costume

SKU: 448697477

Price: £45



Sexy Ebola Nurse Costume includes:

- Hazmat Dress
- Hazmat Leggings
- Safety Goggles
- Prop Gas Mask

* PLEASE NOTE: this item is not suitable for protection against hazardous materials.

ADD TO CAR

Legionnaires' Disease Outbreak

(Oct 2014 South Bronx)

Confirming Water Safety



Confirming Cooling Tower Disinfection





<u>Identifying Foodborne Outbreaks Using Yelp & Twitter</u>









- Develor
- July 20
 - o Yel
- Prograr foodbor
- Ask use
 - o Coi
 - o Nai
 - Car

NYC Foodborne @NYCFoodborne · 37m



Sorry you were sick! Did you know that the **NYC Health Department** investigates food poisoning caused by NYC restaurants? Help us prevent #foodpoisoning from happening again by providing more information here: a816-healthfbt.nyc.gov/survey?documen...



Curious about how we found your Tweet and who contacted you? The NYC Health Department is conducting a research project with Columbia University on foodborne illness in NYC. We'd like to ask you a few questions.

Please complete this form. The information you provide will be sent to the NYC Health Department and may prevent others from getting sick.



7



In Summary

Must have staff or partnership for social media capability. It is now a mandatory communication tool during public health emergencies

Even with the best social media analytical tools, monitoring still requires a human touch (e.g. verification, interpretation, reporting to leadership, detecting sarcasm, etc).

Combination of tools needed.

Pick up on new keywords / trends and modifying queries as emergency evolves.

A lot of preparation can and should be done in advance.

Build a VOST relationship (whether or not you have internal capacity)

Stay on top of current social media trends.



Questions ???

CONTACT INFO:

Tamer Hadi thadi@health.nyc.gov

347.396.2769

@tamer_hadi (opinions my own!)
http://www.linkedin.com/in/tamerhadi



Q&A



Thank You

