Social Media and Collaborative Technology in Science & Health:

From CFAR-SSA to Coronavirus

Larry William Chang, MD, MPH
Associate Professor of Medicine, Epidemiology, and International Health
Johns Hopkins School of Medicine and Bloomberg School of Public Health
Director, Inter-CFAR SSA Working Group
Disclosures

- I have a financial interest in *emocha Health Inc.* which I helped found and does work related to this topic.
CFAR-SSA
The Inter-CFAR Sub-Saharan Africa Working Group is composed of CFAR-affiliated investigators (US and SSA-based) interested in HIV research in SSA.

Established in 2011

**CFAR-SSA Goals:**

1. Capacity Build Junior SSA Investigators
2. Promote New Collaborative Research Opportunities
CFAR-SSA Activities/Resources

• **International Mtgs**
  – Kampala (UCSF), Cape Town (Hopkins), Durban (Brown/Harvard), Nairobi (UW)
  – Next Meeting IAC 2020 San Francisco/Oakland (Led by UCSF) ???

• **Listserv:** ~693 members
  – https://groups.google.com/group/CFAR-SSA

• **Facebook Group**
  – www.facebook.com/groups/cfarssa/

• **Website:** resources, links, presentations
  – www.hopkinscfar.org
How do we use social media and technologies to build research collaborations and community?

(and respond to a public health emergency)
Social Media & Technology Tools
Listservs

- **Listserv** - an electronic mailing list
- In 1986, Éric Thomas developed “Revised Listserv”, the first automated mailing list management application.
- Simple
- Asynchronous
- Awkward for discussion
- Moderator needed
- **How to**
  - Google Groups
  - Any email service

Facebook

- Facebook Groups
- FB reach itself is high but group participation can be low.
- Needs moderation and basal activation energy.
Websites

• Range
  – Mostly static reference point, e.g. most academic sites
  – Dynamic, constantly updating, e.g. news sites, epidemic mapping, etc.

• Searchable—thus often necessary as a point of contact

• Cons—needs moderation and upkeep

UW Medicine COVID-19 Resource Site

Welcome to the UW Medicine COVID-19 Public Site. The clinical and administrative teams throughout our system have been working together to provide accurate and timely information to the public. However, we understand that this is a rapidly evolving situation and that information is changing frequently. We will continue to update this site as information becomes available. Please check back frequently for the latest updates.

If you have questions or concerns about your health, please contact your healthcare provider. For information about local health department and hospital resources, please contact the Health District at 206-258-1180. For non-medical questions, please call 206-258-1180.

For the latest information, please visit the Centers for Disease Control and Prevention (CDC) website at https://www.cdc.gov/coronavirus/2019-ncov/index.html.

If you are experiencing symptoms of COVID-19, please call your healthcare provider or visit one of our urgent care locations. Please do not go to the emergency room except in cases of life-threatening illness or injury.

Inter-CFAR Sub-Saharan Africa Working Group (CFAR-SSA)

The Inter-CFAR Sub-Saharan Africa Working Group (CFAR-SSA) is a collaboration of researchers and organizations working to address the HIV/AIDS epidemic in sub-Saharan Africa. The group's goals are to develop and implement innovative interventions that are effective in the region and to disseminate best practices to other countries and regions.

Focus Areas (2013-14)

By selecting high-priority scientific focus areas (1-4) every 2 years, CFAR-SSA will be better able to coordinate resources for more coherent funding strategies and provide a framework for collaborative activities. Areas can evolve, such as with input during the proposed biannual Conference, allowing for a balance of new ideas and input with targeted activities.

The initial 6 focus areas are as follows:

1. High-Impact Interventions
2. Key Populations
3. HIV/AIDS in Low- and Middle-Income Countries
4. Innovative Approaches to HIV/AIDS Research
5. Multisectoral Approaches to HIV/AIDS Prevention
6. Global Health Inequities and HIV/AIDS

https://covid-19.uwmedicine.org/Pages/default.aspx
Whatsapp

- Messaging/calling app
- 2 billion active users
- Owned by Facebook
- End-to-end encryption
- Phone, Desktop, & Web
- Simple, Powerful
- Nothing with greater reach

Examples:
- CROI discussion group
- Virtual journal club

Creating a Virtual Journal Club: A Community of Practice Using Multiple Social Media Strategies
Michelle Lin, MD (@M_Lin)
Jonathan Sherbino, MD, MEd (@sherbino)

WhatsApp Is at the Center of Coronavirus Response
The World Health Organization is partnering with the messaging app to help ensure trustworthy information gets out.

Facebook Messenger similar
Twitter

- Microblog & Social Network Tool
- 280 character limit
- Nothing with more immediate scientific/public health reach to the public.
- What is on Twitter today, becomes the news headline of tomorrow.

Learn More About Twitter Here ➔ Twitter for Researchers from the Emory CFAR
Reddit

- A “social news aggregation, rating, and discussion website”
- 5th most visited website in U.S.
• If you have video content, a logical place to share.
• Create a channel
• Add subscribers
• Videos are public, unlisted, or private.
Instagram, TikTok, Snapchat, etc.

- Lots more out there
- Know your audience

Use of social media platforms by age group in the US

This is a visualization from OurWorldInData.org, where you find data and research to make progress against the world’s biggest problems. Licensed under CC-By by the author Edknow Onli-Ophra.
Communications Software: The Rise of Zoom

- Communications Software
  - Talk
  - Video
  - Chat
  - Share Screen

Zoom CEO: Coronavirus outbreak will ‘change the landscape’ of work and communication

BY NAT LEVY on March 7, 2020 at 6:00 am
Collaboration Software

- Typically combines chat, application integration, and file storage.
- Searchable and a living history of a project.
- Everyone must learn and commit.
- Desktop, Phone, Web
Google Docs, Sheets, Slides

- Free, web-based software c collaboration tools

Exclusive: The Strongest Evidence Yet That America Is Botching Coronavirus Testing

“I don’t know what went wrong,” a former CDC chief told The Atlantic.

ROBINSON MEYER AND ALEXIS C. MADRIAGAL  MARCH 6, 2020

Live tracker: How many coronavirus cases have been reported in each U.S. state?

Using data from the COVID Tracking Project, we’re following how each state is responding to COVID-19.

New York
61,601 tests | +55,908 since last week

New Jersey
2,290 tests | +2,638 since last week

Washington
27,121 tests | +14,901 since last week

California
12,860 tests | +4,524 since last week

Illinois
8,319 tests | +7,306 since last week

Michigan
3,106 tests | +7,746 since last week
How else does this play out in the Real-World?
Doctors and Patients Turn to Telemedicine in the Coronavirus Outbreak

The use of virtual visits climbs as a way of safely treating patients and containing spread of the infection at hospitals, clinics and medical offices.

Virtually Perfect? Telemedicine for Covid-19

Judd E. Hollander, M.D., and Brendan G. Carr, M.D.
Coronavirus disruptions reverberate through research
Scientists grapple with halted projects and locked-down labs

Digital, Limited Interaction Trials and Epidemiology (D-LITE): Targeting HIV Incidence in the United States (U01 Clinical Trial Required)

- U01 Research Project – Cooperative Agreements
- New

July 26, 2019: Changes to NIH Requirements Regarding Proposed Human Fetal Tissue Research. See Notice NOT-OD-19-128


RFA-AI-19-087

Screening Online Questionnaire
- Email covid19@umn.edu if you think you have been exposed to COVID19
- You will be sent an email with information about our prevention study
- A URL link will be provided for you to take the online screening survey

Medication Shipped
- Study medicine will be shipped overnight to your address
- Study medicine should arrive by 10:30am
- Take 4 tablets of the study medicine with some food or milk

Online Survey (Day 1)
- You will receive an email with a link to an online survey
- Take the second dose of 2 tablets 6-8 hours after the first
- Take other medicines >= 4 hours apart from the study medicine

Study Days 2-4
- You should take 3 tablets each morning
- If you develop upset stomach, you may separate the pills, for example 2 at breakfast, 1 at lunch
- Take other medicines >= 4 hours apart from the study medicine

Online Survey (Day 5)
- You will receive an email with a link to an online survey
- This should be the same day you finish the study medicine

End of Study Survey (Day 14)
- You will receive an email with a link to an online survey
- Unless you have developed symptoms, this marks the end of the study. There are no further requirements for you.
- If you have developed symptoms, we will reach out to you with further instructions.
Travel Bans

RE: THE TRAVEL ADVISORY ON CORONAVIRUS DISEASE FOR UGANDANS INTENDING TO TRAVEL, RESIDE IN AND OR RETURN FROM AFFECTED COUNTRIES

The Ministry of Health would like to inform all travellers that there is an active Coronavirus Disease outbreak (COVID-19) in China and several other countries across the globe. As of 03 March 2020, a total of 90,536 cases including 3,117 deaths have been confirmed globally from 37 countries. So far the most affected countries are China, Republic of Korea, Japan, Italy and Islamic Republic of Iran among others.

To date, Uganda has no confirmed case of COVID-19.

Coronavirus Disease (COVID-19) is a highly infectious disease caused by the new Coronavirus (COVID-19). It is spread from person to person through sneezing, coughing, hand shaking and contact with contaminated surfaces. The Ministry of Health strongly advises all Ministries Departments and Agencies (MOAs) and the business community on the following:

1. **Those Intending to travel:**
   - Delay travel to the COVID-19 affected countries as we monitor the situation.
   - If one must travel, he/she should avoid close contact with individuals having flu-like symptoms. These include fever, cough, sneezing and difficult breathing. They should also avoid crowded places like markets, churches and tourist sites.
   - If you become sick while travelling, inform crew and seek medical care immediately.
   - If you become sick with flu-like symptoms while in foreign country, please stay at your residence and call your host/organiser and the nearest Ugandan Mission for immediate attention.

2. **Persons returning from most affected countries:**
   The persons returning from the most affected countries mentioned above will be required to:
   - Comply with screening measures and advice from health workers at the airports and/or other border entry points
   - Self-isolate under close monitoring by the Ministry of Health Surveillance Team for a period of 14 days
   - Must inform the surveillance team promptly for advice if they develop fever, cough, flu, running nose and difficulty breathing. The surveillance team will advise on the next course of action.

The Ministry of Health will from time to time update you on the risk profile of the Coronavirus Disease.

For further information, please contact the following offices for advice and assistance:
Mr. Atek Kagirita - 0782 909 153 and Dr. Allan Muruuta - 0772 460 297. You may also call the toll free numbers: 0800-203-033 and 0800-100-056.

Dr. Henry G. Mwebaze
DIRECTOR GENERAL HEALTH SERVICES

cc: Hon. Minister of Health
cc: Minister of State for Health - General Duties
cc: Minister of State for Health - Primary Health Care
cc: Permanent Secretary
Africa, Coronavirus, and HIV Research

- Studies have/will close.
- Travel will be limited.
- HIV and Coronavirus?
- Epidemic dynamics could be quite different
- How do CFARs stay engaged?
The Online Writing Accountability Group (WAG)

• Fogarty D43 Activity

• WAGs
  – Small group
  – Commit to meeting regularly
  – Dedicate time to writing
Virtual Meetings

- CFAR Webinar!!!
- Cons
  - Q&A
  - Networking
  - Serendipity
- How to recreate in-person interactions?
Sharing Data

Rakai Community Cohort Study (RCCS)

What Data Are Contained In This Tool?

The RCCS is an open, population-based cohort of agrarian, trading, and fishing communities located in Rakai Region, Uganda, providing insight into HIV disease burden, sexual behaviors, and treatment and prevention service coverage in sub-Saharan Africa. In the tool below, incidence and prevalence trends for HIV infection can be explored by demographic groups across survey rounds. The vertical lines displayed for each round represent 95% confidence intervals for each epidemiologic measure of HIV infection. To view additional information about the trend line, hover over data points of interest to display the tooltip.

### Official Update of COVID-19 Situation in Singapore

- **Active Cases:** 309
- **Hospitalised Stable:** 295
- **Hospitalised Critical:** 14
- **Deaths:** 2
- **Discharged:** 144

**DORSCON Level:** Orange

For latest update, visit MOH website [here](https://www.moh.gov.sg/covid19).

**Case Details:**
- Case 4555: Age 38, M, NCD
- Case 4564: Age 22, F, NCD
- Case 4573: Age 41, M, NCD
- Case 4582: Age 22, F, NCD
- Case 4583: Age 62, M, NCD
- Case 4595: Age 44, M, NCD
- Case 4584: Age 21, M, NCD
- Case 4585: Age 21, M, NCD
- Case 4597: Age 32, M, NCD

**Additional Details:**
- **Case 4590**
  - **Date of Confirmation:** 3/1/2021
  - **Hospitalised:** Yes
  - **Hospitalised Critical:** No
  - **Discharged:** Yes

**Explanatory Notes:**
- [Covid-19 Care Package December 2020](https://www.moh.gov.sg/covid19/care-package)
Phylogenetics

Genomic epidemiology of novel coronavirus

Maintained by the Nextstrain team. Enabled by data from GISAID.


Phylogeny

Nextstrain.org/ncov
Mapping Data

- 1 billion usage requests per day
Maps and Smart Devices

Look up influenza-like illness near you:

Search zip code or county name

Atypical Illness Levels:

- N/A
- None
- Low
- Mild
- Moderate
- High

Atypical Illness
Observed Illness

Last updated: March 20, 2020

https://healthweather.us/
Smartphone Surveillance

Sustainable containment of COVID-19 using smartphones in China: Scientific and ethical underpinnings for implementation of similar approaches in other settings

David Bonsall\(^1\), Michael Parker\(^2\), Christophe Fraser\(^1\)
Twitter broadly bans any COVID-19 tweets that could help the virus spread

Russia using coronavirus fears to spread misinformation in Western countries

Welcome to the first social media pandemic. Here are 8 ways you can stop the spread of coronavirus misinformation.

Jessica Guynn USA TODAY
Published 3:00 a.m. ET Mar. 19, 2020 | Updated 2:59 p.m. ET Mar. 19, 2020
Tips As We Go Virtual

- Turn on your video when you can
- The most important button is the mute button
- Don’t assume you are muted
- Learn & experiment with the new technologies
- Brush up on conference call etiquette
- Get good equipment (camera, microphone/speaker, green screen, etc.)
- Empathy & Awareness

Technology can separate us, distract us and instill fear in us: teachers know well that it sometimes does all three. It can feel like its own prison. But it can bring us together too.
Thank you!

Gary Larson