



Twitter for Antimicrobial Stewardship Useful or a waste of time?



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OSU College of Pharmacy

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Twitter @idpharmd

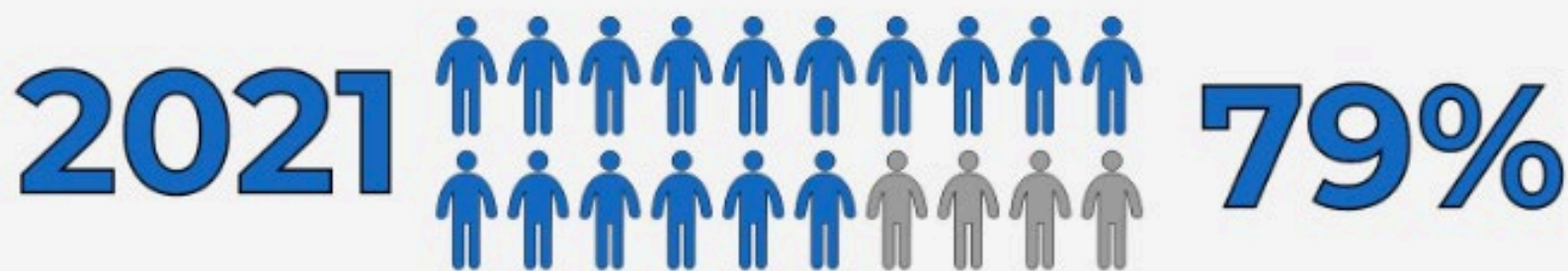


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Medical
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As of 2021, 79% of Americans have a social media profile.



This number is up from 10% in 2008 and from around 50% in 2011



RIDING THE TWITTER WAVE

Enthusiasm for the social media platform changed science communication during the pandemic—but will it last?

Social Media Stats

2021 Twitter Statistics

- [Twitter first turned a profit in 2017](#), quieting some concerns that it didn't know how to monetize and might be on its way out.
- Only [22 percent](#) of people in the U.S. use Twitter, down from 24 percent in 2019, and [80 percent of Twitter users are from countries other than the U.S.](#)

2021 YouTube Statistics

- We watch over 500 billion YouTube videos each day, which accounts for more than [1 billion hours of YouTube videos each day](#).
- [400 hours](#) of video are uploaded to YouTube every minute.
- There are around 1.3 billion people who use YouTube regularly.

2021 Instagram Statistics

- There are now more than [1 billion users on Instagram](#).
- There are also some [500 million daily active users](#).
- Instagram is the place for images, as we might expect. On average, Instagram images get [23 percent more engagement](#) than Facebook images.

2021 TikTok Statistics

Tik Tok has more than [600 million active users](#), up from just under 30 million less than two years ago. It is now one of the most popular social media sites in the world.

- Around 13 million new videos get uploaded to TikTok every single day.
- After launching as primarily a Chinese social media site, [42 percent](#) of TikTok's monthly revenue now comes from the U.S.
- TikTok is very popular among teens, and [14 percent](#) of young adult internet users in the U.S. are on Tik Tok.
- TikTok has high engagement levels; [28.56 percent](#) of TikTok users open the app at least once a day.

Hospital Perspectives on the Use of Social Media

ASP's should follow their lead

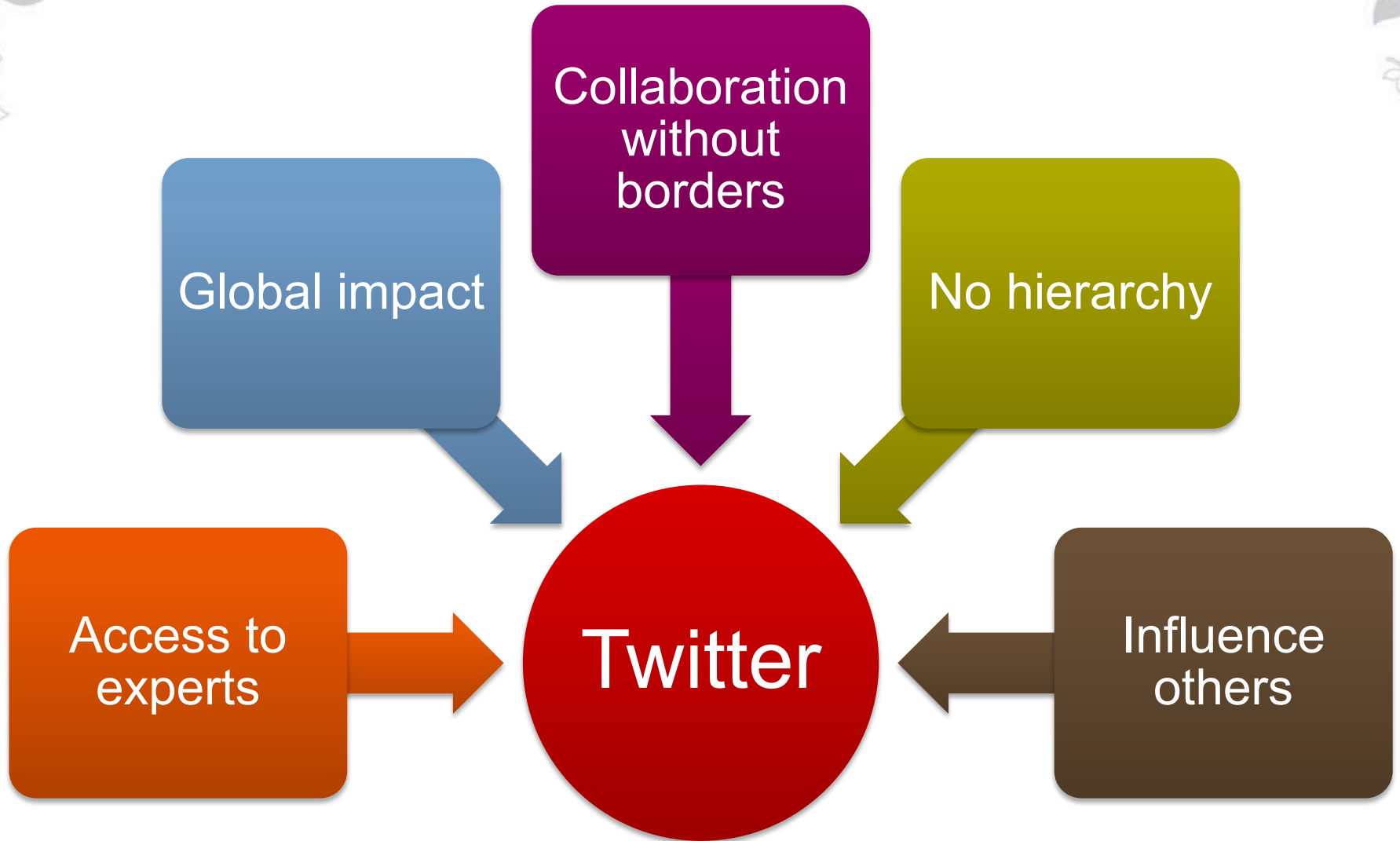
Lori Howley. Executive Director Corporate Communications and Chief Marketing Officer of MelroseWakefield Healthcare (Melrose, Mass.). Social media marketing has forever changed the healthcare marketing landscape by providing the data, means and platforms needed to deliver highly personalized messaging and meaningful content to consumers. It allows you to connect with consumers in real time with content, resources and actionable items that support their needs and interests in alignment with your brand platform. This builds brand trust and consumer satisfaction.

Amy Stevens. Vice President and Chief Marketing Officer of Tidelands Health (Murrells Inlet, S.C.). Social media has removed the middleman from our conversations with consumers. In the past, we largely relied on media outlets — whether via paid or earned media — to pass messages to external audiences. Today, we engage directly with consumers via social media and consumers engage us. The result is a vibrant, two-way conversation that allows us to better listen and be more agile. It's the difference in talking "to" someone versus talking "with" someone.

Why Twitter?



Twitter and ASP



How the best hospitals use social media to boost consumer engagement — and how you can too

LiveWorld - Tuesday, July 26th, 2022

Mayo Clinic, ranked number one for Twitter, maintains multiple Twitter accounts and tweets or retweets 10 or more times per day. But, this strategy can be replicated by smaller systems. "In a smaller hospital, you may have individual doctors, nurses or a public affairs unit already tweeting," Ms. Skilling said. "The trick is to hashtag across posts so all of them can work together to strengthen your base."

Showcase your patients' stories and your in-house talent.

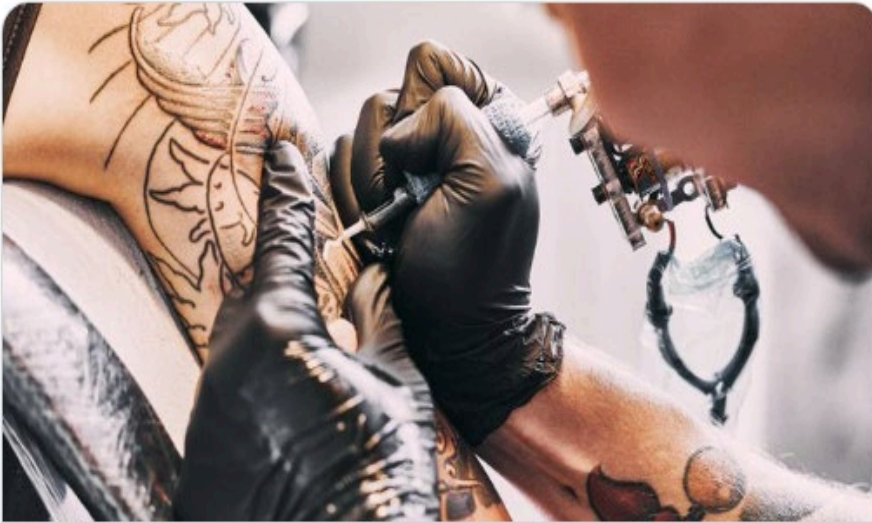
A best practice for hospitals is offering frequent medical, wellness and community content and putting a spotlight on healthcare providers who can offer guidance on specific health needs.

Leaders drive interaction by engaging with their audience. This engagement comes through frequent posts —on channels including Facebook, Twitter, Instagram and TikTok.

The Ohio State University Wexner Medical Center

The Ohio State University Wexner Medical ... @OSUWex... · 19h ...

Thinking about getting a tattoo? Follow these tips to prevent tattoo infections.



health.osu.edu

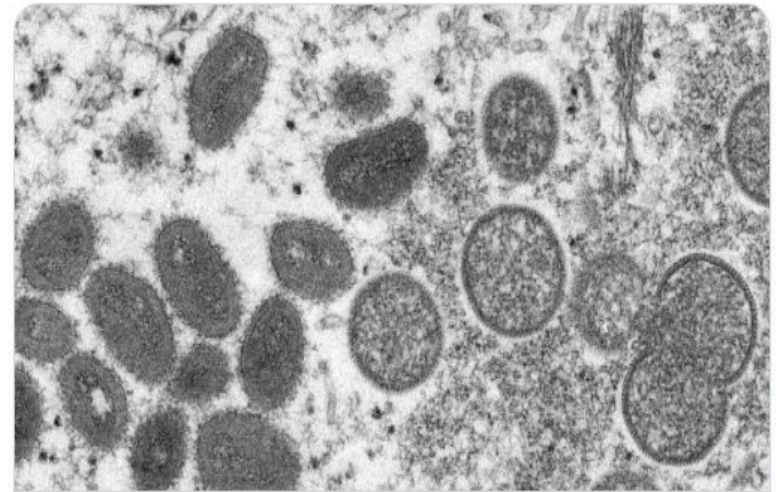
How to prevent a tattoo infection

While relatively rare, a tattoo infection can cause symptoms ranging from minor to serious. Here's how to keep that new tattoo clean and ...



The Ohio State University Wexner Medic... @OSUWe... · Aug 19 ...

Dr. Liscynsky at #OSUWexMed talks about monkeypox virus with college campus opening back up to students.



nbc4i.com

What college students need to know about Monkeypox

COLUMBUS, Ohio (WCMH) — There are 75 confirmed Monkeypox cases in the state of Ohio. With college students from all over set to ...

Worldwide Stewardship Publications

Should we continue down the same path and expect a different outcome?



“Limited progress has been made despite the fact that sound guidance is available.” Ref: Sandora T. NEJM 2012 Dec 6



Drew Shirley, MD
@drewshirleymd



#surgtweeting heavy hitters here.
Excited! @OsuSurgery Grand
Rounds "Twitter for Surgeons: Useful
or a Waste of Time?"

THE OHIO STATE UNIVERSITY DEPARTMENT OF SURGERY

SURGERY GRAND ROUNDS



Presentations by

Debra A. Goff, PharmD

Clinical Associate Professor, College of Pharmacy
Director, Infectious Diseases Residency Program
The Ohio State University Wexner Medical Center



E. Christopher Ellison, MD

Interim Dean, College of Medicine
Robert M. Zollinger Endowed Chair and College of Medicine Distinguished Professor,
Department Surgery
CEO of the Faculty Group Practice and Senior Associate Vice President of Health Sciences
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Christian D. Jones, MD

Assistant Professor of Surgery
Division of Trauma, Critical Care and Burn
The Ohio State University Wexner Medical Center



Benedict C. Nwomeh, MD, MPH

Professor of Clinical Surgery
Director, Pediatric Surgery Training Program
The Ohio State University Wexner Medical Center and the Nationwide Children's Hospital

"Twitter for Surgeons: Useful or a Waste of Time?"

Reply to Drew Shirley, MD, OSU Surgery



OSU Surgery @OsuSurgery

1d

An innovative, informative and FUN
format #TwitterGrandRounds
@bnwomeh @jonessurgery @idpharmd
@2_ellison





Scholarship

Twitter publications

INVITED ARTICLE

CLINICAL PRACTICE

Ellie J. C. Goldstein, Section Editor

Clinical Infectious Diseases® **2015**;60(10):1533–40

Review of Twitter for Infectious Diseases Clinicians: Useful or a Waste of Time?

Debra A. Goff,¹ Ravina Kullar,² and Jason G. Newland³

¹Department of Pharmacy, The Ohio State University Wexner Medical Center, Columbus; ²Clinical Scientific Director, Department of Medical Affairs, Cubist Pharmaceuticals, Lexington, Massachusetts; and ³Department of Pediatrics, Division of Infectious Diseases, Children's Mercy Hospital-Kansas City, University of Missouri-Kansas City, Missouri

INVITED ORIGINAL ARTICLE

Use of Twitter to Educate and Engage Surgeons in Infectious Diseases and Antimicrobial Stewardship

Debra A. Goff, PharmD,* Christian Jones, MD,† Blake Toney, PharmD,‡ Benedict C. Nwomeh, MD,†§ Karri Bauer, PharmD,* and E. Christopher Ellison, MD†

Infect Dis Clin Pract **2016**

Current Infectious Disease Reports (2020) 22: 14
<https://doi.org/10.1007/s11908-020-00723-0>

TECHNOLOGY AND INFECTIOUS DISEASE (C HEBERT, SECTION EDITOR)

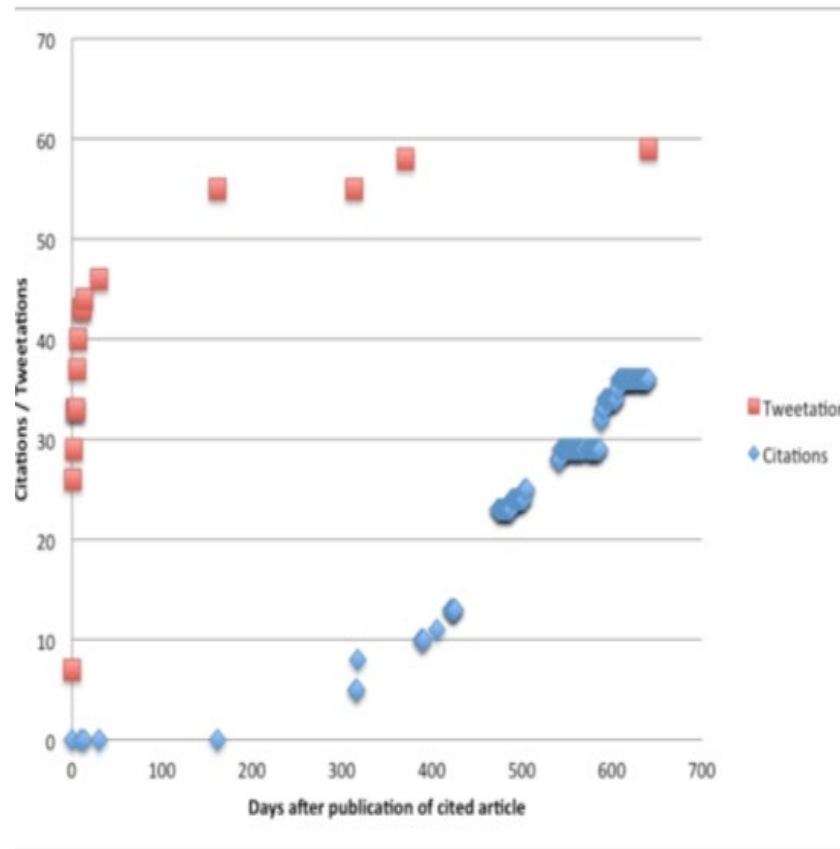
To Tweet or Not to Tweet—a Review of the Viral Power of Twitter for Infectious Diseases

Ravina Kullar¹ • Debra A. Goff² • Timothy P. Gauthier³ • Tara C. Smith⁴



THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Tweetations Occur Earlier than Citations



“ID Tweets” targeted to surgeons



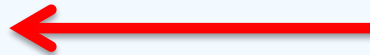
Debbie Goff @idpharmd · Jan 7

218

In-hospital death 36% with #antibiotic colistin for carbapenem resistant infections

cid.oxfordjournals.org/cgi/content/lo...

[View Tweet details](#)



Debbie Goff @idpharmd · now

when is less better? when its #antibiotic duration of therapy for IAI
@jonessurgery @2_ellison @Southafricanasp dx.doi.org/10.1089/sur.20...



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Formerly Archives of Surgery

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New Editor: Inaugural Editorial

Current Highlights

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Original Investigation | January 21, 2015 **FREE ONLINE FIRST**

NSAIDs and Anastomotic Failure

This cohort study reports an increased risk for anastomotic complications after colorectal resection when postoperative nonsteroidal anti-inflammatory drugs (NSAIDs) are prescribed.



Click on twitter icon and it creates the link

Twitter & ASP

Learn



Educate & Engage



Advocacy



Scholarship





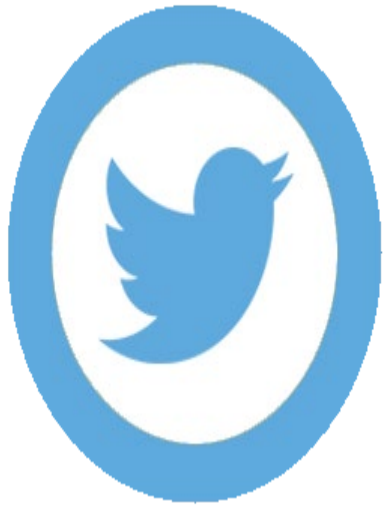
Twitter

- Your audience: the world
- Your voice: passive or active
- Your time: if you find value in it, you will find time

Ask yourself

Do I want the world to hear what I have to say?

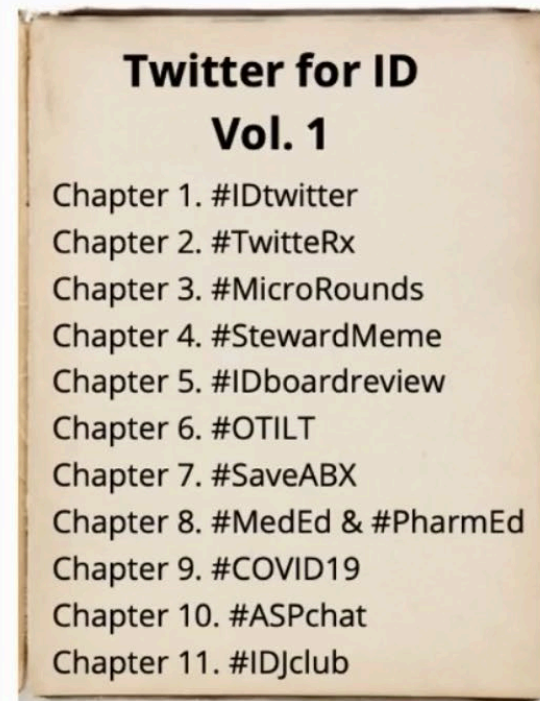




Learn


Tim gauthier



Is Twitter The New ID Textbook?





#IDTwitter

Antibiotic Steward Bassam Ghanem  ⚡ @ABsteward · 1h

 ⚡ Systematic Review & meta-analysis suggests that with the evolution of mutant strains, the incubation period of COVID-19  gradually from Alpha variant to Omicron variant

Alpha: 5d

Beta :4.5d

Delta: 4.4d





Omicron: 3.4d [#IDTwitter](#)

jamanetwork.com/journals/jaman...

Barbara Trautner @bwtrautner · 19h

[#IDtwitter](#) I'm at an ID board review course and spotted an elevator amenity guaranteed to please



 Do you think MOST of our non-I.D. colleagues know that a positive C.difficile PCR  can be colonization (if no  ) and doesn't need treatment ?

[#DiagnosticStewardship](#)

[#IDtwitter](#) [#MicroRounds](#)

Yes

No

I didn't even know

#ASPchat

@ASP_Chat Follows you

Following

Third Thursday of every month 7-8P EST #ASPchat ... Discussions on antimicrobial stewardship... Organized by @IDstewardship & @BRxAD, inspired by @CDCgov

#ASPchat @ASP_Chat · Aug 17

...

Here are the 🤔 💬 questions for the #ASPchat tomorrow.

Hope to see you there!!

Q3. What are some common mistakes you see repeated when it comes to 🧬🔪💧 antibiotic selection?

#ASPchat



Q6. If (when?) we have future 🦠📈 COVID-19 waves, what are some repeated mistakes to try to avoid?

#ASPchat



Q2. What are some common mistakes you see repeated when it comes to interpreting 🧪📊 microbiology lab data?

#ASPchat



Q5. What are some repeated mistakes you have seen that contribute to the 🤔🤔🤔🤔🤔🤔🤔🤔🤔 burnout of infectious diseases professionals?

#ASPchat



Q1. Which mistakes have we seen in the past that we can avoid when it comes to managing and 🔪🧬 reducing the spread of #Monkeypox?

#ASPchat



Q4. What are some common mistakes you see repeated when it comes to 🤔🔴 antibiotic timeouts?

#ASPchat



Brad Langford ✓ @BRxAD · Aug 18

Replying to @ASP_Chat

ASPs are commonly under-resourced. Programs need resourcing not only for their own mental health, but also to be effective at doing their job. We found that ASPs with dedicated funding resources used 12% less antibiotics than those without



Dan McQuillen Retweeted



Clinical Infectious Diseases @CIDJournal · Aug 10

Infectious Diseases Society of America Guidance on the Treatment of AmpC β -Lactamase-Producing Enterobacterales, Carbapenem-Resistant *Acinetobacter baumannii*, and *Stenotrophomonas maltophilia* Infections



Freely Available



bit.ly/3nRPvA7



CDC Antibiotic Resistance @CDC_AR · Aug 10

Are you a singing scientist or healthcare professional? @ThatMould, a U.K. musical, is recruiting in Atlanta & D.C. to help increase awareness of #AntimicrobialResistance through the arts! Apply now at:



mouldthatchangedtheworld.com

US SHOWS - The Mould that Changed the World

The sell-out Edinburgh Fringe musical is touring to Washington DC and Atlanta in the fall; audition to ...



Engage and Educate



Eccmid 2022

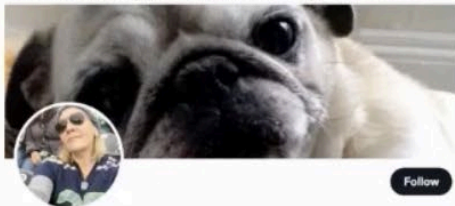
The influence of influencers



Virology

Immunology

Profanity/Combat by Twitter



Follow

Dr. Angela Rasmussen

@angie_rasmussen

Virologist. PI @VIOCIinterVac, Adj Prof @USask BMI. Aff @georgetown_gvss. Pillar 2 @coveer_net. Jeopardy! loser. 🇨🇦 in 🇨🇦. Rep @anniescranton. she/her

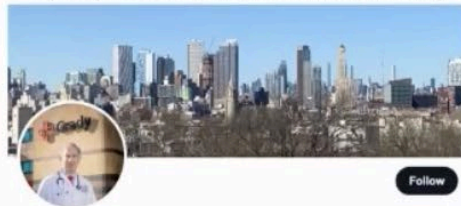
📍 Saskatoon, Saskatchewan 🌐 angiearasmussen.org 📅 Joined October 2011

6,883 Following 361K Followers

Clinical Medicine

Academic Leadership/Mentoring

Spicy Criticism/Commentary



Follow

Carlos del Rio

@CarlosdelRio7

Executive Associate Dean for Emory at Grady; co-Director of Emory CFAR. International Secretary of NAM. Posted opinions are own. RT not endorsements.

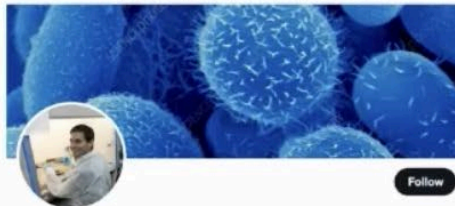
📍 Atlanta, GA 🌐 drCarlosdelRio.com 📅 Joined December 2011

1,494 Following 54K Followers

Infectious Disease

Transplant Mycology

#Covid Trendsetter



Follow

Neil Stone

@DrNeilStone

Infection doctor. Fungi. @BRITMNetwork. 1st person to use the word #Covid according to Oxford English Dictionary. Tweets in personal capacity only.

📍 Medical & Health 📅 Joined October 2017

12.2K Following 34.3K Followers

ID Pharmacy

Antimicrobial Stewardship

Meme/Emoji Stewardship



Follow

Bug Pharmacist 📍 Tim Gauthier

@IDStewardship

I ❤️ bugs & drugs. Trained in Infectious Diseases & Antibiotic Stewardship. Instagram is my jam #ScrollAndLearn. Opinions mine. SUBSCRIBE: bit.ly/SubscribeYes

📍 Miami 🌐 LearnAntibiotics.com 📅 Joined July 2012

1,316 Following 27.9K Followers



Combined audience on Twitter:
477,000 followers

Twitter is an **AMAZING** resource and platform for interacting directly with huge groups of diverse people around the world
Building Networks * Science Communication * Public Engagement * Sharing Research * Fostering Multidisciplinary
Collaboration * Debunking Misinformation * Promoting Public Health * Joking Around * Cute Animal Pics * Making Friends

The Marriage of Twitter and Science during COVID-19

UK scientist with 170,000, among them members of the U.K. Parliament, scientists, and journalists.

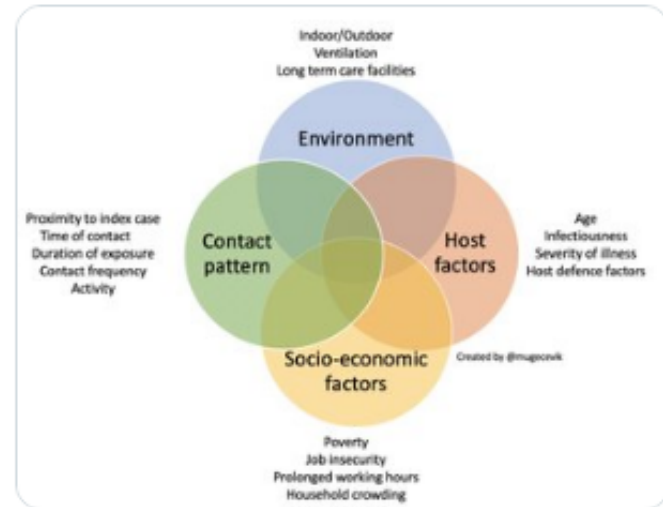
Twitter threads have paid off. She expanded her thread on poor ventilation into a paper published in *Clinical Infectious Diseases*.

Her posts were also retweeted by Harvard University's Marc Lipsitch, who then invited her to collaborate, leading to **three co-authored papers about COVID-19**.

That partnership “would have never happened prior to social media”



The risk of transmission is complex and multi-dimensional. It depends on many factors: contact pattern (duration, proximity, activity), individual factors, environment (i.e. outdoor, indoor) & socioeconomic factors (i.e. crowded housing, job insecurity). (2/n)



12:26 PM · Sep 21, 2020



Surgeons, Infectious Diseases, and Twitter Hit a Home Run for Antibiotic Stewardship

Debra A. Goff,¹ John Alverdy,² Anthony T. Gerlach,¹ Julio Mayol,³ and Benedict Nwomeh⁴

¹Department of Pharmacy, The Ohio State University Wexner Medical Center, Ohio State University College of Pharmacy, Columbus, Ohio, USA; ²Department of Surgery, University of Chicago, Chicago, Illinois, USA; ³Hospital Clinico San Carlos, Instituto de Investigación Sanitaria San Carlos, Universidad Complutense de Madrid, Madrid, Spain; and ⁴Department of Pediatric Surgery, Nationwide Children's Hospital, Columbus, Ohio, USA

ID Pharmacist
OSU
9,700

Surgeon
Chicago
6,500

Surgeon
Spain
54.4K

Surgeon
OSU
6,600

77,000 followers



Twitter Strategy to Engage Others in ASP #SoMe4Surgery

Table 1. Twitter Strategy to Engage Surgeons in Infectious Diseases Topics

Step 1	Ask surgeons at your hospital for their recommendations of which surgeons to follow on Twitter. Use the LIST function on the Twitter user page to create your list of surgeons.
Step 2	Tweet ID information relevant to the surgical specialty. Include links to articles and the Twitter handle of selected surgeons from your LIST. Use the Twitter hashtag #SoMe4Surgery (Social Media for Surgeons) to engage additional surgeons.
Step 3	When a surgeon follows you, add them to your list for inclusion in future tweets.
Step 4	In each ID tweet, continue to add Twitter handles from surgeons who follow you.
Step 5	When you identify an ID topic of common interest, direct-message the surgeon to discuss opportunities to collaborate.

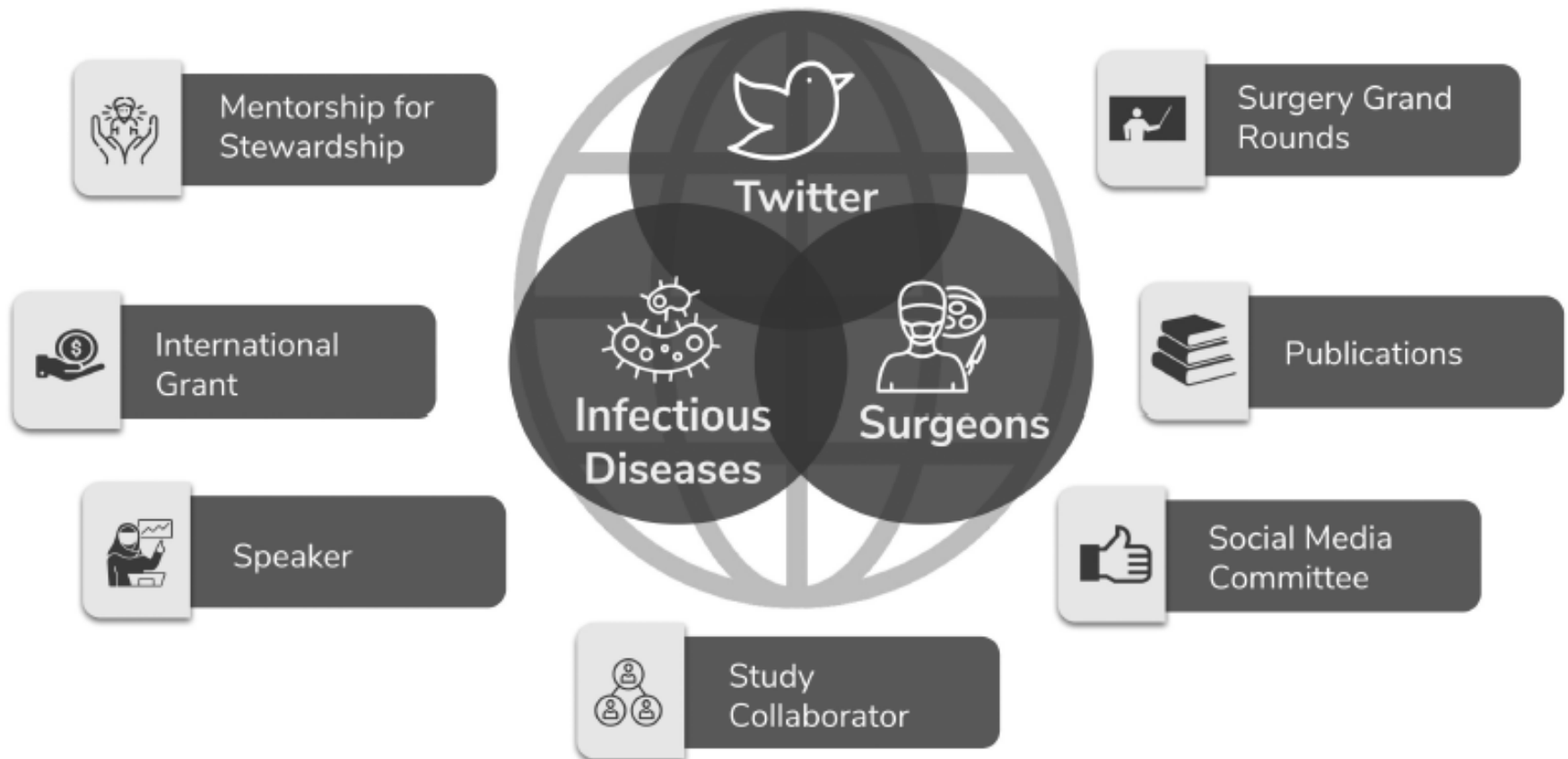


#SoMe4Surgery

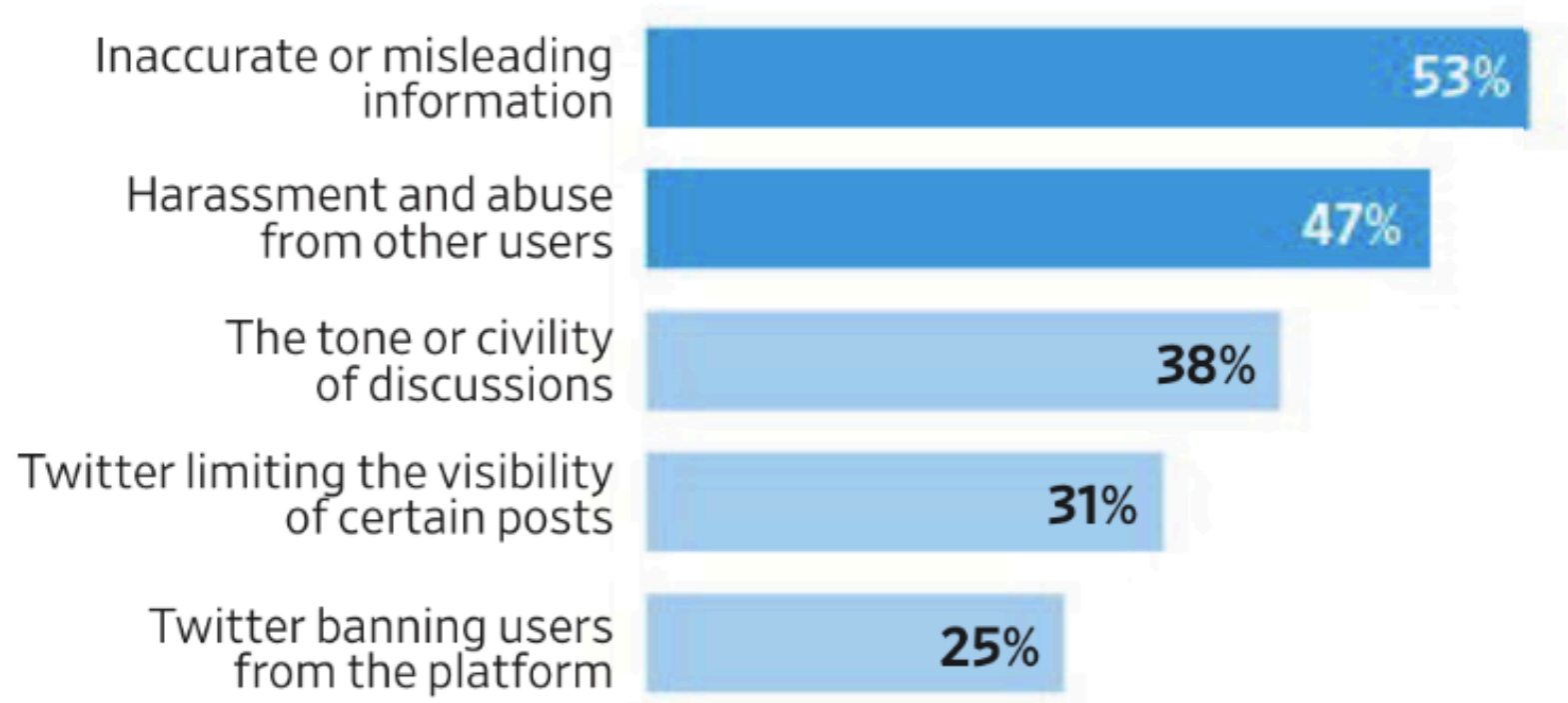
- ◆ Campaigns could be specifically designed by ID specialists and surgeon collaborators
- ◆ Engage “Superspreaders” highly connected opinion leaders
- ◆ Engage key organizations such as ACS, SIS, IDSA, SIDP, & SCCM
- ◆ The impact of the information dissemination could be objectively quantified
 - number of users involved
 - most engaging users
 - most influential users
 - most active users
 - global reach



Outcomes of an infectious diseases pharmacist's and surgeon's relationships built on Twitter



Percentage of U.S. adult users who say each of the following is a major problem on Twitter



Note: Respondents could submit multiple responses.

Source: Pew Research Center survey of 2,548 U.S. adults conducted online May 17-31, 2021; margin of error: +/-3.4 percentage points



Goff's Guide to Twitter

5- minute orientation

1.

Sign up and create a twitter name
keep it simple, avoid long names

2.

Create your bio so people know
who you are and what you're about

3.

Learn infectious disease related
hashtags (#)

4.

Follow people, organizations,
medical journals of interest

5.

Start tweeting!

twitter 



Twitter for Antimicrobial Stewardship

Useful or a waste of time?



Useful