



Social media: Useful or useless in infection prevention and control?

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Hosted by Paul Webber

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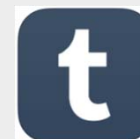
August 24, 2017

Purpose of today's teleclass



What is (are?) social media?

- Internet sites and applications that allow users to **create, share, edit, and interact** with online content
- Contain information generated **by users, for users**
- Any online platform where **groups of people** can communicate with each other **in real time**, and **other users can find them**





The stats

(as of last week...)

**AUG
2017**

GLOBAL DIGITAL SNAPSHOT

THE LATEST NUMBERS FOR INTERNET, SOCIAL MEDIA, AND MOBILE USAGE AROUND THE WORLD

TOTAL
POPULATION



we
are
social

7.524
BILLION

URBANISATION:

54%

INTERNET
USERS



3.819
BILLION

PENETRATION:

51%

ACTIVE SOCIAL
MEDIA USERS



we
are
social

3.028
BILLION

PENETRATION:

40%

UNIQUE
MOBILE USERS



5.052
BILLION

PENETRATION:

67%

ACTIVE MOBILE
SOCIAL USERS



2.780
BILLION

PENETRATION:

37%



SOURCES: POPULATION: UNITED NATIONS; U.S. CENSUS BUREAU; INTERNET: INTERNETWORLDSTATS; ITU; INTERNETLIVESTATS; CIA WORLD FACTBOOK; FACEBOOK; NATIONAL REGULATORY AUTHORITIES; **SOCIAL MEDIA** AND **MOBILE SOCIAL MEDIA:** FACEBOOK; TENCENT; VKONTAKTE; LIVEINTERNET.RU; KAKAO; NAVER; NIKI AGHAEI; CAFEBAZAAR.IR; SIMILARWEB; DING; EXTRAPOLATION OF TNS DATA; **MOBILE:** GSMA INTELLIGENCE; EXTRAPOLATION OF EMARKETER AND ERICSSON DATA.



Hootsuite™

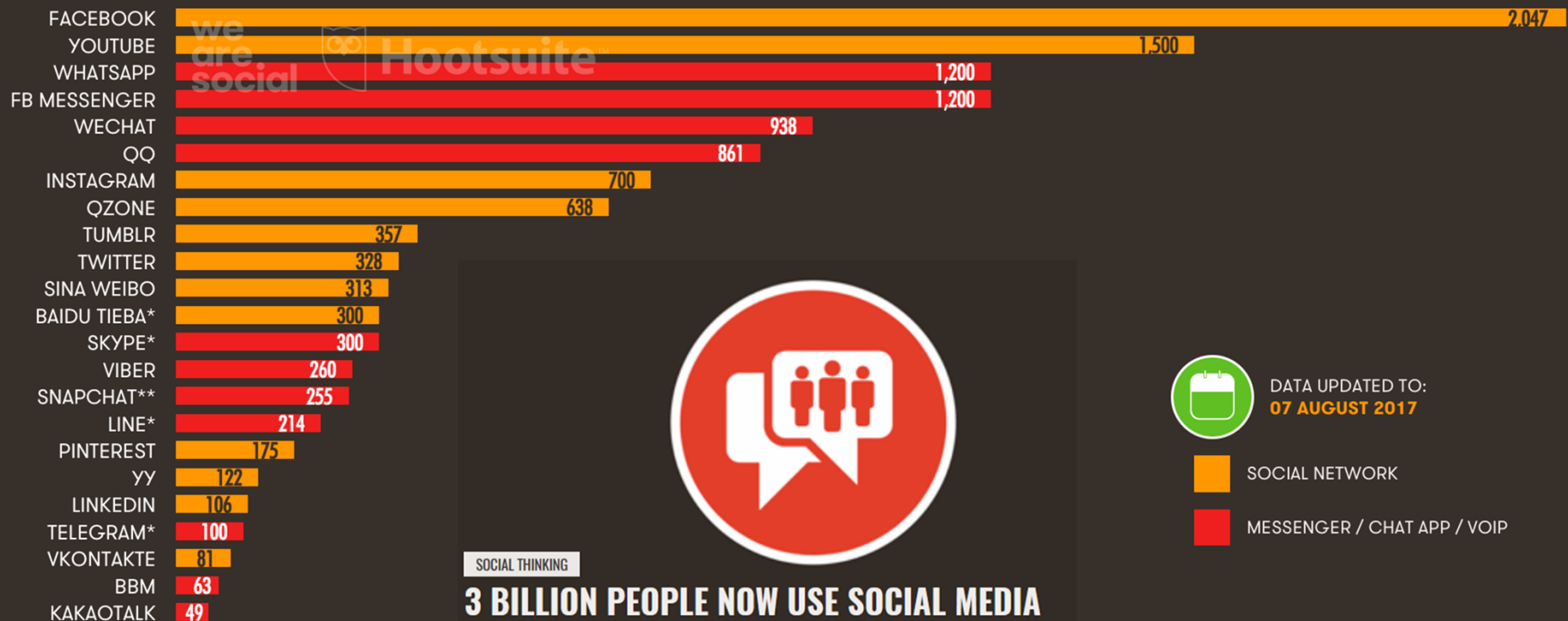
we
are
social

By platform

**AUG
2017**

ACTIVE USERS OF KEY GLOBAL SOCIAL PLATFORMS

BASED ON THE MOST RECENTLY PUBLISHED MONTHLY ACTIVE USER ACCOUNTS FOR EACH PLATFORM, IN MILLIONS



SOCIAL THINKING

3 BILLION PEOPLE NOW USE SOCIAL MEDIA



DATA UPDATED TO:
07 AUGUST 2017



SOCIAL NETWORK



MESSENGER / CHAT APP / VOIP

Number of users is not the only metric

The top 10 sites on the web

Based on data from Alexa, a combination of the highest visitors and page views.

	Daily Page Views (per person)	Daily Time on Site (mins)
1. Google.com	8.6	8:45
2. Youtube.com	5.38	9:21
3. Facebook.com	5.17	13:25
4. Baidu.com	6.63	7:44
5. Wikipedia.org	3.31	4:26
6. Yahoo.com	3.88	4:27
7. Google.co.in	7.12	8:24
8. Reddit.com	9.53	14:05
9. Qq.com	4.52	5:03
10. Taobao.com	4.48	8:33

Source: Alexa.com

A few more stats ¹

8

- Patients
 - 32% of US users post about their friends and family's health experiences on social media. (Source [PWC](#))
 - 29% of patients viewing health information through social media are viewing other patients' experiences with their disease. (Source [PWC](#))
 - 27% of patients comment or post status updates based on health-related experiences. (Source [MDDI](#))
- Public
 - 43% of baby boomers are starting to leverage social media for healthcare related information. (Source [Mature Marketing Matters](#))
 - 18-24 year olds are >2x as likely than 45-54 year olds to use social media for health-related discussions. (Source [Mediabistro](#))
- Hospitals
 - Out of the 5,624 hospitals in the United States, 1,501 are using a form of social media, (26%). (Source [OXZ IN](#))
 - There are at least 967 hospitals on Twitter and around 3,000 hospitals have a company page on LinkedIn. (Source [Becker's Spine Review](#))
 - There are 695 hospitals on YouTube. (Source [Becker's Spine Review](#)) YouTube traffic to hospital sites has increased 119% year-over-year. (Source [Google's Think Insights](#))
- Docs
 - 88% of physicians use the Internet and social media to research pharmaceutical, biotech and medical devices. (Source [Master of Health Administration](#))
- HS
 - More than 10 million tweets mentioning the word "Ebola" were sent between September 16 and October 6, 2014 from 170 countries ²

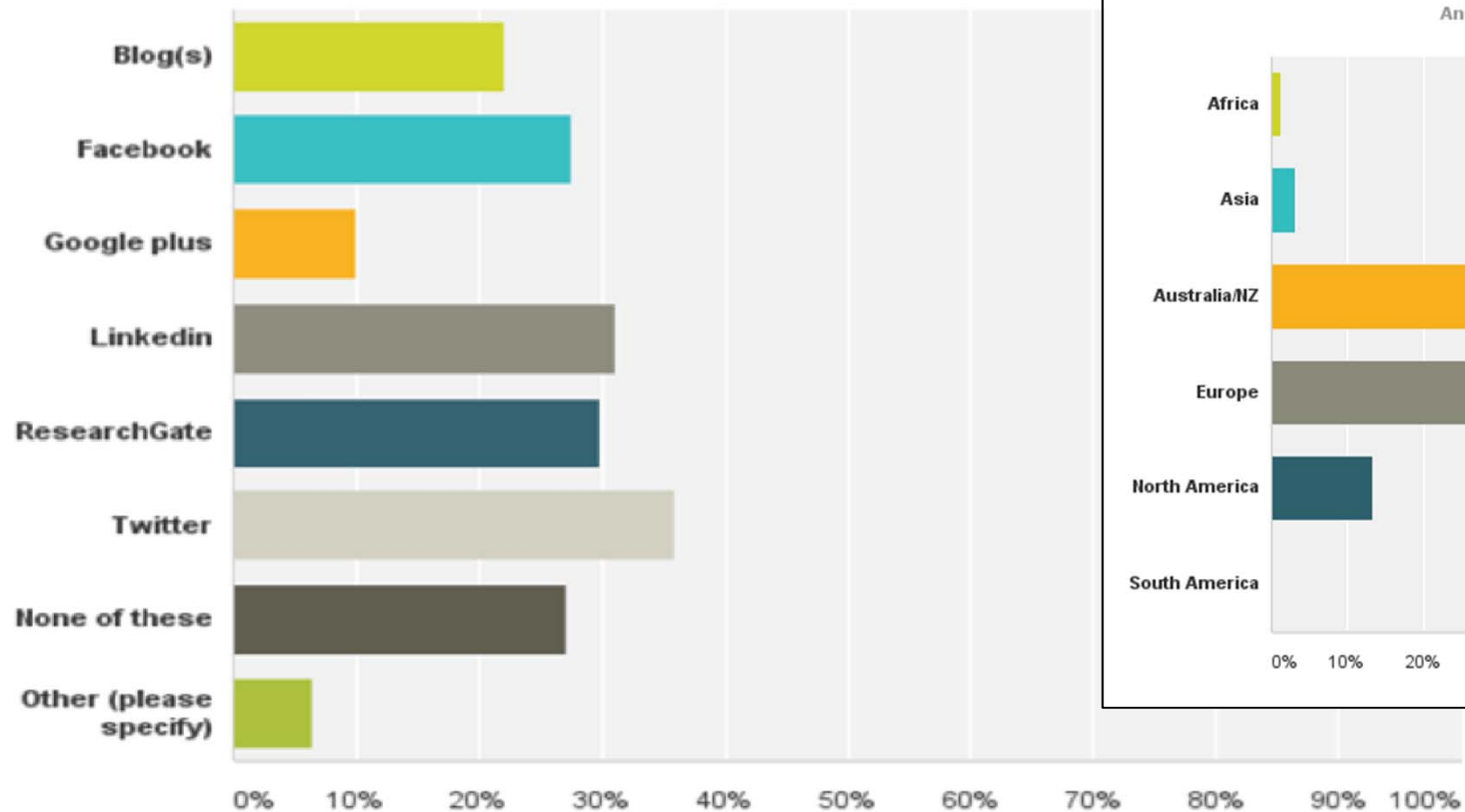
1 30 Facts & Statistics On Social Media And Healthcare <https://getreferralmd.com/2017/01/30-facts-statistics-on-social-media-and-healthcare/>

2 Goff, D. A., Kullar, R., & Newland, J. G. (2015). Review of Twitter for infectious diseases clinicians: Useful or a waste of time? *Clinical Infectious Diseases*, 60(10), 1533–1540. <https://doi.org/10.1093/cid/civ071>

Healthcare professionals

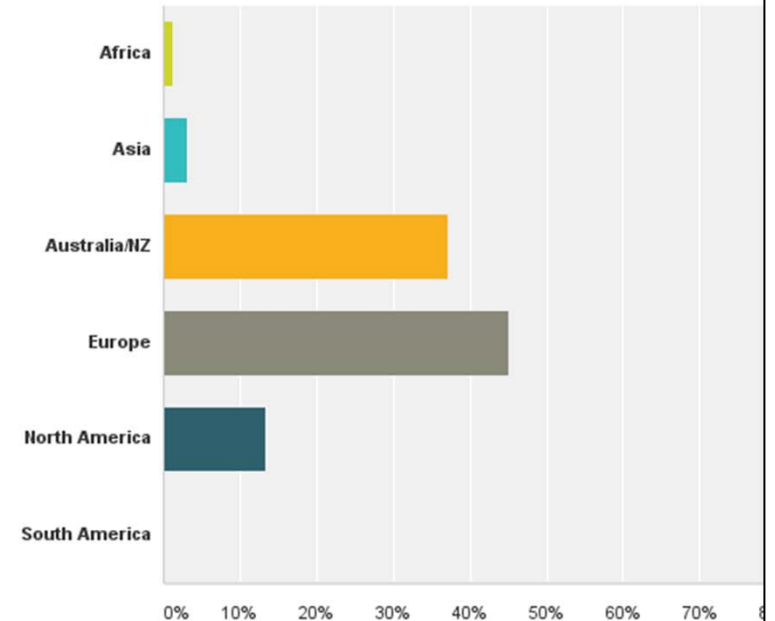
**Q5 Do you use any of the following social media sites regularly for professional use?
Select any that apply**

Answered: 742 Skipped: 7



Q3 In which continent do you reside?

Answered: 749 Skipped: 0



Source: Jon Otter, 2016 <https://reflectionsipc.com/2016/04/10/social-media-survey-for-healthcare-professionals-the-results/>

Unclear what "regularly" is

The HCP “Big 6”

- **Facebook:** most adults already use (2bn!)
- **Twitter:** more searchable (hashtags, keywords)
- **YouTube:** under-utilized in healthcare
- **Blogs:** credible source of information
- **Forums:** the original social media!
- **LinkedIn:** the jury is out...¹



How antibiotics work

eBug Website • 263K views • 2 years ago

This clip describes how **antibiotics** work to kill bacteria, the difference between bacteriostatic and bactericidal **antibiotics**, and why ...

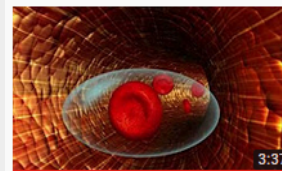
CC



Microbiology - Bacteria Antibiotic Resistance

Armando Hasudungan • 159K views • 3 years ago

<https://www.facebook.com/ArmandoHasudungan> Support me: <http://www.patreon.com/armando> Instagram: ...



How antibiotics work and how bacteria become antibiotic resistance

Miguel Salvador Tejero Cordero • 61K views • 3 years ago



Infectious Disease: Antibiotic Ladder - OnlineMedEd

OnlineMedEd • 157K views • 1 year ago

Free online lecture provided by OnlineMedEd @ www.onlinemeded.org. Designed for third and fourth year medical students to ...

4K



What causes antibiotic resistance? - Kevin Wu

TED-Ed • 1.1M views • 3 years ago

View full lesson: <http://ed.ted.com/lessons/how-antibiotics-become-resistant-over-time> now, you are inhabited by ...

CC



Microbiology - Antibiotics Mechanisms of Action

Armando Hasudungan • 257K views • 3 years ago

<https://www.facebook.com/ArmandoHasudungan> Support me: <http://www.patreon.com> Instagram: ...

¹ <http://www.bbc.com/news/technology-40932487>

Forums still exist...

Ask the Experts About Aging With HIV

FORUM EXPERT:



Nelson Vergel

Program for Wellness Restoration

Recent Answers

Answers by Category

Ask a Question

Enter Your Question About Aging With HIV

Since your question may be posted publicly, if you wish to remain anonymous, please provide information. Due to volume considerations, not all questions will be answered and they will be grouped together similar questions. Response time may vary, depending on professional expertise required, etc.

Fields marked with an asterisk(*) are required.

TITLE OF QUESTION:*

(10 words or less)

QUESTION:*

DoctorsLounge.com

Doctor's Lounge is a website focused on providing articles, academic journal papers and medical news for health professionals. Its focus on the research and academic side of medicine makes it a great place for patients to find information on their own.

Additionally, there's an "Ask a Doctor" link in the left sidebar that takes you to a gateway page where you can enter the medical forums.

SURGERY		TOPICS	POSTS	LAST POST
	Surgery Topics Moderators: Radiodiagnosis Team, Primary Care Team, Cardiology Team	380	1049	by Dr. Chan Lowe Tue Oct 25, 2011 12:33 a
KIDNEY DISORDERS (NEPHROLOGY)		TOPICS	POSTS	LAST POST
	Renal Failure Moderators: Radiodiagnosis Team, Primary Care Team, Cardiology Team	55	127	by Dr.M.Aroon kamath Fri Aug 27, 2010 1:15 pm
	Nephrotic Syndrome Moderators: Radiodiagnosis Team, Primary Care Team, Cardiology Team	18	51	by Dr.M.jagesh kamath Thu Sep 02, 2010 5:13 ar
	Glomerulonephritis Moderators: Radiodiagnosis Team, Primary Care Team, Cardiology Team	12	28	by edput Tue Jun 02, 2009 3:29 pm
	Dialysis Moderators: Radiodiagnosis Team, Primary Care Team, Cardiology Team	8	18	by nina80 Sat Jun 19, 2010 1:00 pm

Social media is a two-way street



- Or is it?
 - Information disseminators
 - Information consumers

Who is using social media in healthcare, and why?

- General public / patients
 - find information
 - discuss with others
 - form communities
- Healthcare professionals
 - Public health educators: post information, reminders, PSA; online interventions
 - Researchers: share results; search for topics that need further research, recruit volunteers
 - Professional groups
 - Educational facilities (inc teaching hospitals): publish news/research results, recruit staff/students, promote learning tools



Who is using social media in healthcare: ICPs

(Infection Control Peeps)

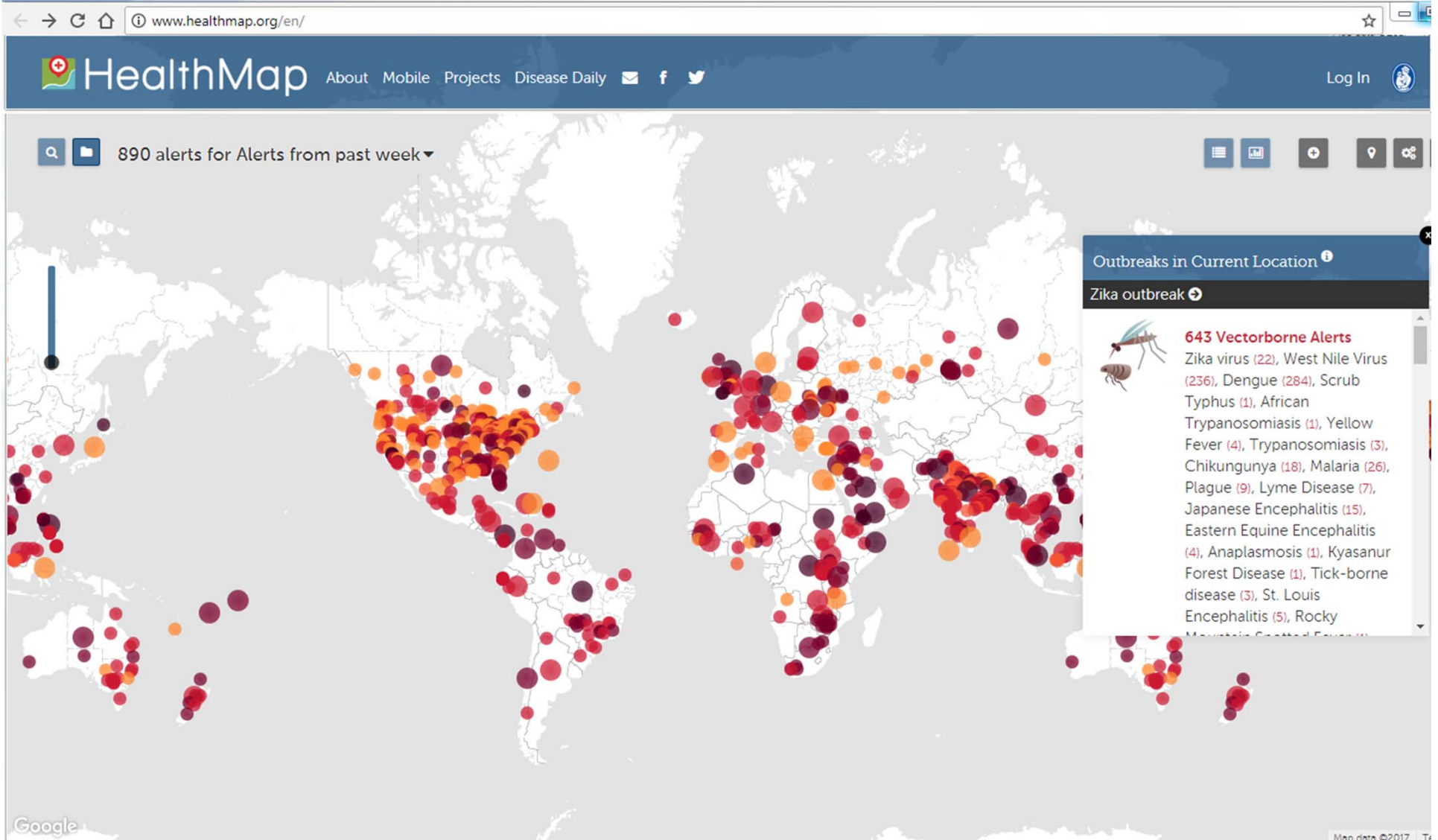
- Keep up to date with news, developments, outbreaks, new guidelines/recommendations, etc.
 - Know the answer before your staff ask you
- Networking
 - Keep in touch with your current/former colleagues
 - virtual communities, or follow specific people
- Learn about educational opportunities
 - conferences, webinars, online courses
- Find/share ideas (e.g. teaching) and resources
- Journal articles, research findings
- Educate patients/public

Monitoring

- New infections (or old ones making a comeback)
 - MERS-CoV, Zika, West Nile, Ebola, avian flu, measles, pertussis, mumps
- Outbreaks ↔ travel

Social media data mining

16



John Brownstein, director of the computational epidemiology group at Children's Hospital Boston and an associate professor of pediatrics at Harvard Medical School

Outbreak reporting in real time

Improving Surveillance











A pioneer in this field, **Brownstein** worked with collaborators at Children's Hospital Boston to launch one of the earliest social media tools in infectious disease surveillance, a website called HealthMap (<http://healthmap.org/>) that mines news websites, government alerts, eyewitness accounts, and other data sources for outbreaks of various illnesses reported around the world. The site aggregates those cases on a global map, with outbreaks displayed in real time. Brownstein's team recently launched Outbreaks Near Me, an iPhone application that delivers HealthMap directly to cell-phone users. Their newest endeavor is Flu Near You (<https://flunearyou.org/>), a website created with the American Public Health Association and the Skoll Global Threats Fund of San Francisco, California, which allows individuals to serve as potential disease sentinels by reporting their health status on a weekly basis.

Traditional flu surveillance by the Centers for Disease Control and Prevention (CDC) relies on outpatient reporting and virological test results supplied by laboratories nationwide. That system confirms outbreaks within about 2 weeks after they begin, but social media can flag more immediate concerns, according to Ashley Fowlkes, an epidemiologist in the CDC Influenza Division.

One of the CDC's more recent collaborators is Google, to which millions of people turn for flu-related web searches. In September 2008, after the company's researchers showed that spikes in flu queries and disease outbreaks often co

Marcel Salathé, an assistant professor at The Pennsylvania State University, says that open access is in part what makes Twitter so promising as a health research tool. "I respect Google and what they're doing with Google Flu Trends, but those data are closed and proprietary, so scientists can't use them," he says. "On the other hand, tweets are full of slang, but we can use machine-learning algorithms⁵ to make sense of those messages."

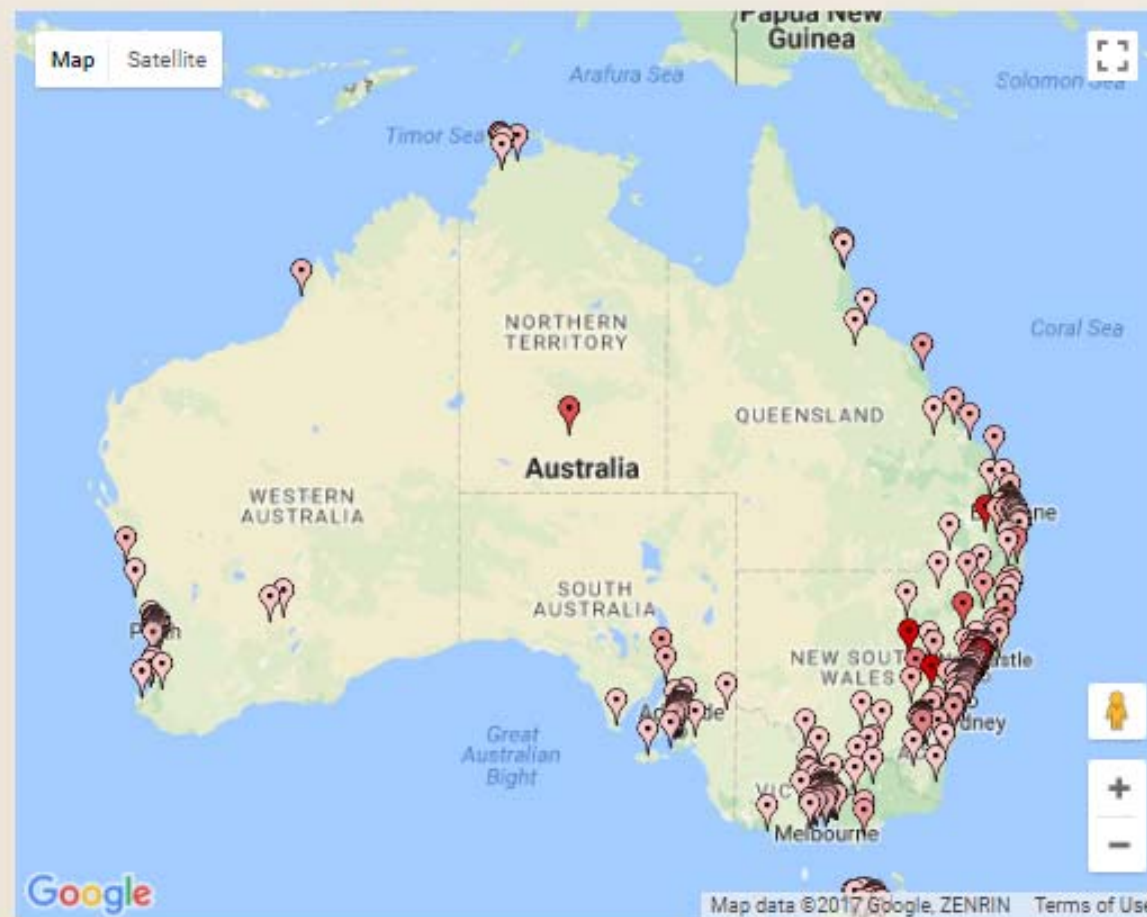
HealthMap filter categories

	<p>Animal Diseases affecting domestic animals, livestock, and wildlife.</p>		<p>Environmental Changes in the environment that may impact human health (natural/man-made disaster, heat wave, volcanic eruption).</p>
	<p>Fever/Febrile Diseases characterized by a high body temperature (fever).</p>		<p>Gastrointestinal Diseases causing vomiting, diarrhea, or abdominal cramping.</p>
	<p>Hemorrhagic Diseases causing severe bleeding.</p>		<p>Hospital Acquired Infection Diseases contracted or primarily spread in health care settings (i.e. hospitals, nursing homes, etc.).</p>
	<p>Neurologic Diseases affecting the nervous system (i.e. brain, spinal cord, or nerves).</p>		<p>Other Undiagnosed diseases, diseases affecting plants/crops, chronic or parasitic diseases, including those that produce vague symptoms.</p>
	<p>Respiratory Diseases primarily causing symptoms such as cough, congestion, difficulty breathing, etc.</p>		<p>Skin/Rash Diseases primarily affecting the skin or that produce a rash.</p>
	<p>STD Diseases that are associated with or primarily spread through sexual contact.</p>		<p>Vectorborne Diseases transmitted to people or animals by arthropods including mosquitoes, ticks,</p>



What Is Flutracking?

Flutracking is an online health surveillance system to detect epidemics of influenza. We are looking for people who live in **Australia** and have easy access to email on a weekly basis. It doesn't matter if you are vaccinated or not.



☑ Week Ending 13-Aug-2017

Professional Education

- Journal articles, education opportunities
 - Get your colleagues' opinion on these
 - Can you share them with all colleagues? (access)
- Journal clubs
- Conferences
 - Can follow in real time
 - Be alerted to slides/videos posted online

Using Twitter to learn from conferences (even when you're not there): #EPHVienna (European Public Health)

ON **NOVEMBER 28, 2016** / BY **SCOTPUBLICHEALTH**

What can we learn from a conference even when we're not there, using Twitter and some big data analysis? I beamed into the European Public Health conference in Vienna, 9-12 November, to find out...

<https://scotpublichealth.com/2016/11/28/using-twitter-to-learn-from-conferences-even-when-youre-not-there-ephvienna-european-public-health/>

If you're going to disseminate

- The popular opinion: build up a following, build up trust

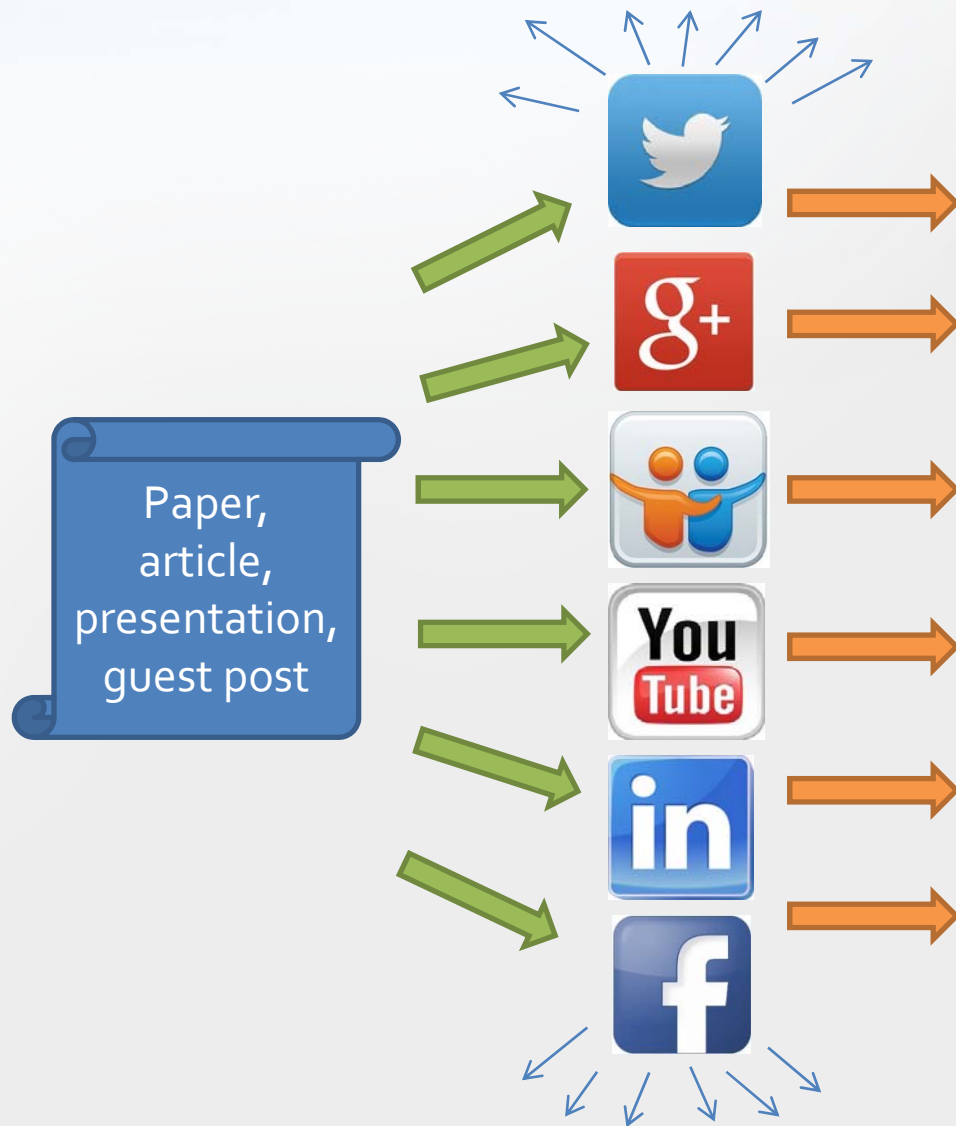
Versus

- Drive-by broadcasting

Or is this fake news?

- Have a plan
- Understandability: know your audience
 - Language level, preferred format
- Even if you wrote it: can you share?
 - Summary of paper
- Monitor for questions

Disseminating via social media



- **Whenever you can, link back to one central place**

Central site/platform
Website, blog, etc.

- Searchable (within site)
- Findable (by search engines)
- Include bio, **other** articles/papers, slide decks, videos, contact info

- Make it as findable as possible (your name, keywords, metadata)
 - Workplace?

The public debate

Jump on in, or play it safe?

- Legal issues
- Ranting? Arguments?
Tangents? Non-listeners?



The rules of (public) engagement

- No clinical advice
- Disclaimer etc. on your website/blog
- Know your facility's social media policy!
 - Is it unclear? Get them to clarify!

Facebook post leaves Prince Albert, Sask., nurse charged with professional misconduct

Woman's lawyer says rules and regulations are too vague

By Victoria Dinh, CBC News | Posted: Jan 12, 2016 3:54 PM CT | Last Updated: Jan 12, 2016 4:59 PM CT

CBCnews | Saskatoon

A post to social media has a Prince Albert, Sask., nurse facing charges of professional misconduct by the Saskatchewan Registered Nurses' Association.

Carolyn Strom's grandfather died in January 2015. The following month she posted a comment to Facebook both criticizing and applauding the efforts made by the palliative care staff at St. Joseph's Health Facility in Macklin, Sask., about 250 kilometres west of Saskatoon.

"My grandfather spent a week in palliative care before he died and after hearing about his and my family's experience there, it is evident that not everyone is 'up to speed' on how to approach end of life care or how to help maintain an ageing senior's dignity," wrote Strom in her post.

"As an RN [registered nurse] and avid health care advocate myself, I just have to speak up," wrote Strom. "Whatever reasons/excuses people give for not giving quality of life care, I do not care. It just needs to be fixed."

Her comments were posted on Feb. 25, 2015 to Facebook, and since then, Strom has been reported to the SRNA by another nurse, and distant relative of Strom's, working at St. Joseph's.

According to the public notice of hearing, the SRNA is charging Strom with violation of confidentiality, failure to follow proper channels, impact on reputation of facility and staff, failure to first obtain all the facts, and using

'What happens to the discussion of health care if you take the people who are experts on that subject and remove them from the discussion?'

- Marcus Davies



Privacy

We are committed to maintaining confidentiality and personal privacy.

[Privacy notice](#)

[Social media](#)

Collection, use, disclosure and retention of personal information is subject to, and must comply with, the provisions of the [BC Freedom of Information and Protection of Privacy Act](#) (FIPPA).

The purpose of this privacy notice is to describe our practices regarding personal information use and collection through any of PHSA's websites. Please note that we do not disclose, give, sell or transfer any personal information about our website visitors unless required for law enforcement or otherwise provided for by law.

We reserve the right to update this policy at any time. Users are responsible for reviewing this document periodically for changes.

What is personal information?

Personal information is recorded information about an identifiable individual other than business contact information and would include, but is not limited to, such things as an individual's name, address, birth date, email address, phone number and Care Card number.

[Collection & use of information](#)



[Analytics & safeguards](#)



Email

Information sent to our websites over the Internet is not secure. This means that if the visitor uses the Contact Us page, or other email addresses published on our websites, to send an email, the information provided may be intercepted as it travels to our websites. We will not be responsible for any damages suffered by individuals as a result of the transmission and information that is sent to us or for any errors or changes made to transmitted information.

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You might see "social media buttons" on some PHSA websites.

Social media buttons let visitors share or bookmark web pages, and are often identifiable by the + sign with Share beside it. There may be buttons for: Twitter, Facebook 'Like', LinkedIn 'Share', StumbleUpon, Digg and others.

In order to connect social buttons to the relevant external sites, there are scripts from those domains, which are outside of this site. Those sites could be collecting information about what you are doing all around the internet, including this site. To be certain what information those sites collect, and how to opt out, check the respective policies of each site.

Related links

PHSA's websites contains links to other websites. PHSA is not responsible for the privacy practices of these websites or the accuracy or reliability of any content found on such sites.

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Vancouver, BC V6Z 2H3

Phone: 604-707-5834
Email: privacy@phsa.ca

[Emergency Numbers](#)

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[Healthlink BC](#)

[Current Outbreaks](#)

[Staff Resources](#)

We have produced a Collection Notice & Community Rules of Engagement for Facebook and Twitter.

Facebook



Twitter



Twitter Collection Notice

The Provincial Health Services Authority (PHSA) uses Twitter as a tool to communicate to people interested in our work. You can follow us [@PHSAofBC](#).

Twitter content delivered by PHSA includes (but is not limited to):

- Links to news releases, health notices, research, presentation information, tips on use of our websites, and health facts and findings
- Links to relevant information produced and published elsewhere (work of other organizations, patient organizations, researchers, news organizations and others). This can include videos, blog posts, and retweets (RTs) or quotes from other Twitter users (See below for our policy on RTs.)
- Interesting facts, quotes or observations related to our work

NOTE: Medical advice will not be provided through social media.

To protect your own privacy and the privacy of others, please do not include any personal information including medical information, phone numbers and email addresses in the body of your comment. Please do not share personal information about others, including in pictures, without

The personal information you post to Twitter may be collected by PHSA under s. 26(c) of the Freedom of Information and Protection of Privacy Act for the purposes of engaging and consulting with the public.

Please be aware that any information collected may be stored and/or accessed outside of Canada on servers not belonging to PHSA.

Retweets (RTs), Quotes & Likes

Tweets we retweet (RT), quote, or like, do not imply endorsement on the part of PHSA. We may like, retweet or quote news, links and personal observations we believe are relevant to the work we do. A like, RT or quote should not be taken as explicit endorsement of any position or argument that may vary from PHSA's official position.

Following

Our decision to follow a particular Twitter user does not imply endorsement of any kind.

Monitoring Hours

All PHSA Twitter feeds are monitored during regular business hours, Monday – Friday, 8:30 a.m. – 4:30 p.m. Pacific Time. We will do our best to respond to tweets within two business days.

Media

Please note, media inquiries will not be responded to on Twitter.

The rules of (dis)engagement

- How to engage/disengage
 - Learn from the pros
 - Forums, public health colleagues
- Point them to the science
 - In their language
 - Lots of format choices (websites, photos, infographics, videos)

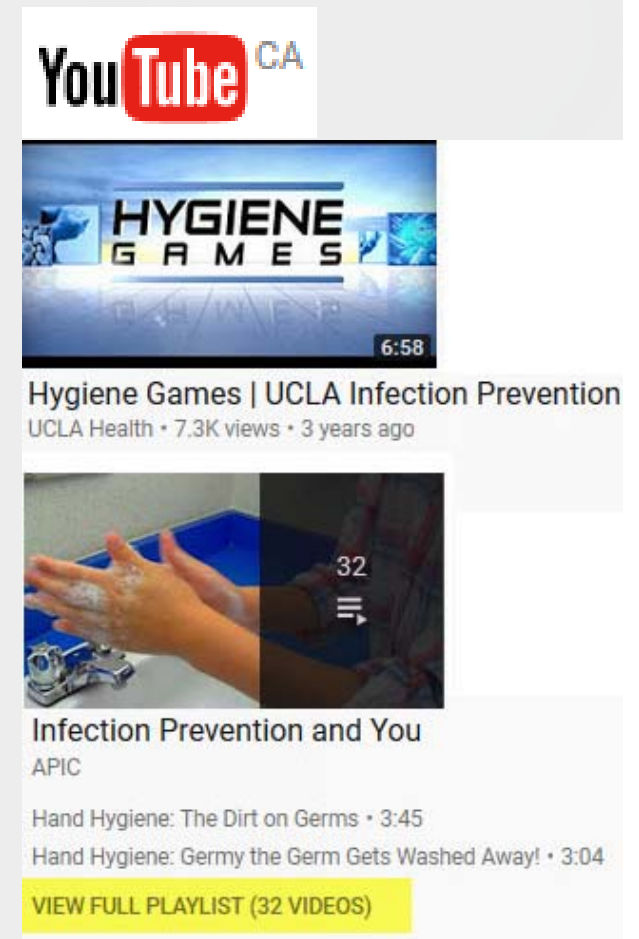
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YouTube CA

HYGIENE GAMES 6:58

Hygiene Games | UCLA Infection Prevention
UCLA Health • 7.3K views • 3 years ago

Infection Prevention and You
APIC

Hand Hygiene: The Dirt on Germs • 3:45
Hand Hygiene: Germie the Germ Gets Washed Away! • 3:04

[VIEW FULL PLAYLIST \(32 VIDEOS\)](#)

The public debate:

Who, how, what, when, why, where?

- Which “public”?
- When and why:
 - Regularly?
 - In response to outbreak/news?
 - Awareness week / event?
 - General knowledge?
 - Behaviour change?
- How: which platform?
 - Participate in a forum
 - Can (co-) write a blog
- What messages, what information?
- What medium?
 - Written, video, photos, cartoons, infographics
- Whom do you want to collaborate with?
 - You don’t have to do it all on your own!

“Patient” education

- Who are the public, who are patients?
 - Inpatients vs outpatients
 - Length of stay, readmission ¹
 - “Experienced” patients, e.g. dialysis
- The public: potential patients
 - Use all the means we can to prevent them from becoming patients!

¹ Almost 20 percent who are discharged from a hospital are readmitted within 30 days

US Medicare patients, <https://www.uptodate.com/contents/hospital-discharge-and-readmission>

Behind the Headlines

Your guide to the science that makes the news

Alcohol linked to an increased risk of skin cancer

Monday Aug 7 2017

"Drinking just one glass of beer or wine a day could give you skin cancer, scientists have warned," the Mail Online reports. Researchers pooled the results of previous studies and found a small, but significant, association between alcohol...



Diabetes drug may be helpful for Parkinson's disease

Friday Aug 4 2017

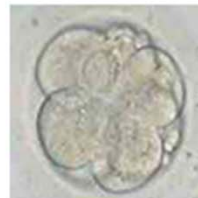
"A drug commonly used to treat diabetes could help those living with Parkinson's disease," The Guardian reports. A small study suggests a drug called exenatide may have a modest beneficial effect on motor (movement) symptoms...



Gene editing used to repair diseased genes in embryos

Thursday Aug 3 2017

"Deadly gene mutations removed from human embryos in landmark study," reports The Guardian. Researchers have used a gene-editing technique to repair faults in DNA that can cause an often-fatal heart condition...



Kitchen sponges may be a 'bacteria hotspot' – but no need to worry



Clinical trials and medical research

Clinical trials explained, including how to take part in one and why medical research is important

Superfoods: the evidence

We examine the evidence behind the health claims made about the most popular superfoods



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<http://www.nhs.uk/News/Pages/NewsArticles.aspx>

Software used to screen social media photos for depression signs

Tuesday August 8 2017

"The images you put up on Instagram could be used to diagnose if you're depressed," the Mail Online reports.

Researchers attempted to see if computer-driven image recognition could diagnose depression based on the form and content of people's posts on Instagram, a social media photo sharing site.

They looked at more than 43,000 images from 166 people, who also completed a survey about their mood.

The researchers found people who reported having a history of [depression](#) were more likely to post images that were bluer, darker and less vibrant.

The computer programme was able to correctly identify 70% of the participants with depression, getting it wrong 24% of the time.

These results were compared with a separate independent study, which estimated that GPs only correctly diagnose 42% of cases.

This is a proof of concept study into what is often referred to as "machine learning", where sophisticated algorithms assess massive amounts of data to see if they can begin to spot patterns in the data that humans can't.

The researchers suggest social media could become a useful screening tool. But aside from whether the science stacks up, there are ethical and legal implications that would need to be considered before this could happen.

If you've been feeling persistently down and hopeless in the last few weeks and no longer take pleasure in things you used to enjoy, you may be depressed. Contact your GP for advice.



Social media can reveal a lot about your state of mind

Where did the story come from?

The study was carried out by researchers from Harvard University and the University of Vermont, and was funded by the National Science Foundation and the Sackler Scholars Programme in Psychobiology.

It was published in the [peer-reviewed](#) journal EPJ Data Science.

There was wide coverage of the story in the media, which was generally accurate – but none highlighted any of the study's limitations.

The media also failed to point out that although the researchers say their 70% detection rate is better than GPs, the GP detection rate was taken from a study that looked at GPs making a depression diagnosis without using any standard assessments. This means we're unable to verify the accuracy of this figure.

What kind of research was this?

This [case-control study](#) compared the Instagram posts of people who reported a history of depression with the posts of those who did not.

Although this is an interesting concept, this type of study isn't able to prove cause and effect.

For example, we don't know whether the individual preferences for colour, mood or genre had changed over time in either group – more people in the depression group may have happened to always prefer the colour blue, for example.

What did the research involve?

The researchers recruited 166 adults aged between 19 and 55 using Amazon's Mechanical Turk (MTurk) crowdwork platform. This

Agencies

- BC Cancer Agency >
- BC Centre for Disease Control >
- BC Children's Hospital and Sunny Hill Health Centre for Children >
- BC Emergency Health Services >
- BC Mental Health & Substance Use Services >
- BC Renal Agency >
- BC Transplant >
- BC Women's Hospital + Health Centre >
- Cardiac Services BC >
- Perinatal Services BC >

Programs & Services

- BC Autism Assessment Network >
- BC Early Hearing Program >
- BC Surgical Patient Registry >
- Health Emergency Management BC >
- Indigenous Health >
- Lower Mainland Pathology & Laboratory Medicine >
- Mobile Medical Unit >

It can work!

Prov Health Services @PHSAofBC · 58m >
#DYK that if you are at the scene of an #overdose and 911 is called, you are not to be charged with simple possession? #StopOverdose

THE GOOD SAMARITAN DRUG OVERDOSE ACT IS NOW LAW

THE LAW SAYS:

If you are at the scene of an overdose and you or someone else calls 911 to get medical assistance, you are not to be charged with simple possession (possession for your own personal use) of an illegal substance.

You are also not to be charged for breach of probation or parole relating to simple drug possession.



IF YOU SUSPECT AN OVERDOSE,
CALL 911
CALLING 911 SAVES LIVES

Prov Health Services @PHSAofBC · 2h >
Patients - got feedback for PHSA? Contact our Patient Care Quality Office. ow.ly/VW79N



Prov Health Services @PHSAofBC · 4h >
BC Mental Health & Substance Use Services has a new website. Check it out for #mentalhealth & #addiction info: bcmhsus.ca



Prov Health Services @PHSAofBC · 19h >
Chances of falling increase as you age. Improve balance to help #prevent falls healthyfamiliesbc.ca/home/articles/... #HealthyAging





Prov Health Services @PHSAofBC · 3h >
Did you know you can say thanks to someone who has helped with #cancer care? It makes a difference to us! bccancer.bc.ca/thanks

BC Cancer Agency

Thank you to the whole team at the Vancouver Cancer Clinic. Everyone was amazing and treated me so well from the Doctors and assistants to the volunteers. I

Social Media: Pros and Cons

- **Pros**
- Fast →
- Easy (+ apps to make even easier)
- Short (depending on platform) →
- Free
- Potentially huge audience →
- Multiple audiences at once →
- Cross-pollination
- Analytics
- **Cons**
- Additional tasks = additional time ←
- Text limits  =140 
- Potentially huge n questions/comments
- How do you speak/translate to all?

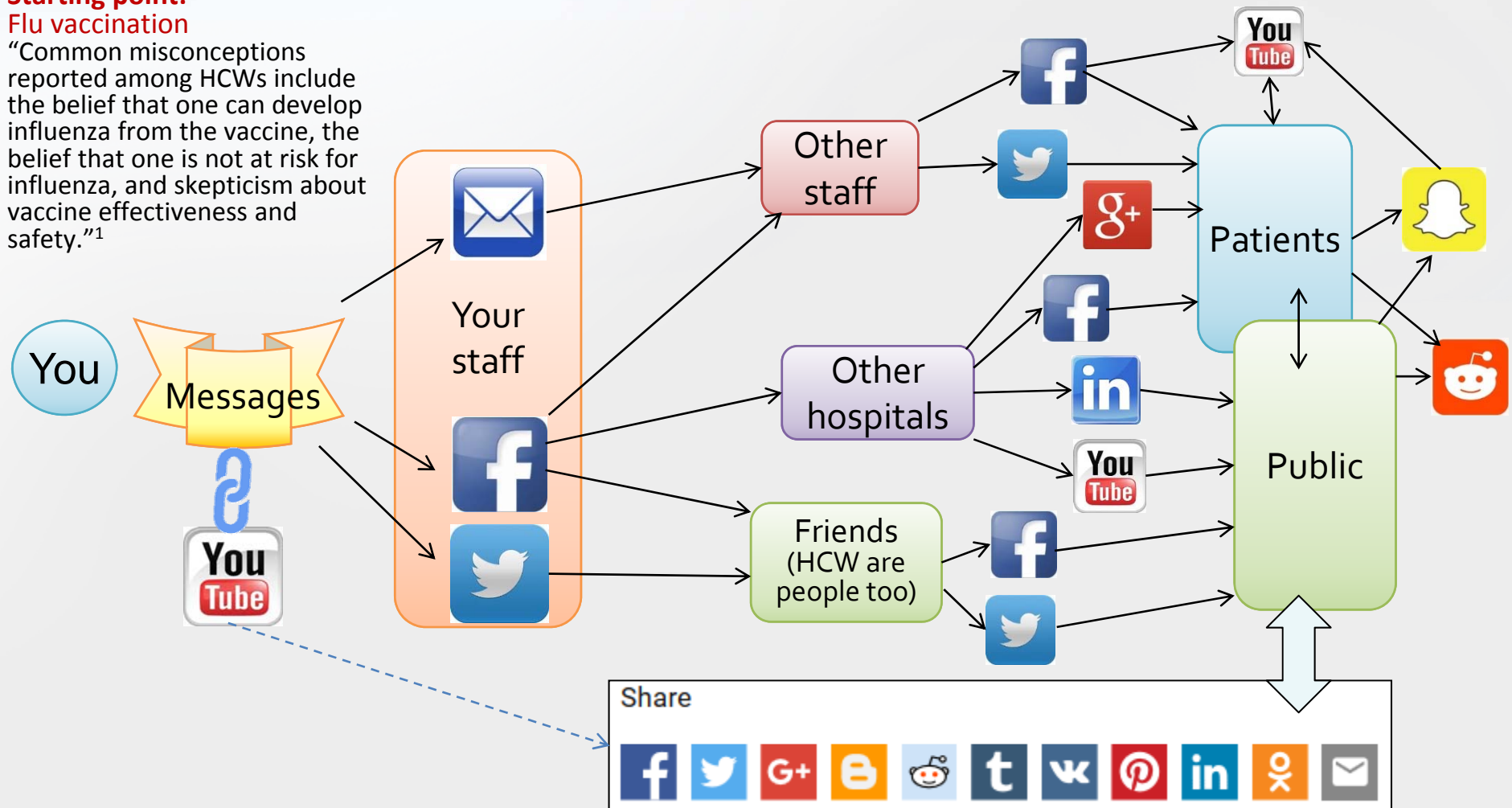
Cross-pollination

= the one time ICPs want something to go viral!

Starting point:

Flu vaccination

“Common misconceptions reported among HCWs include the belief that one can develop influenza from the vaccine, the belief that one is not at risk for influenza, and skepticism about vaccine effectiveness and safety.”¹



1. Venci DP, Slain D, Elswick BM, et al. Inclusion of social media-based strategies in a health care worker influenza immunization campaign. *Am J Infect Control*. 2015;43(8):902-903.

Behaviour Change

- Can social media change behaviour?
- Or is behaviour change the driver of social media?
- Know the motivators



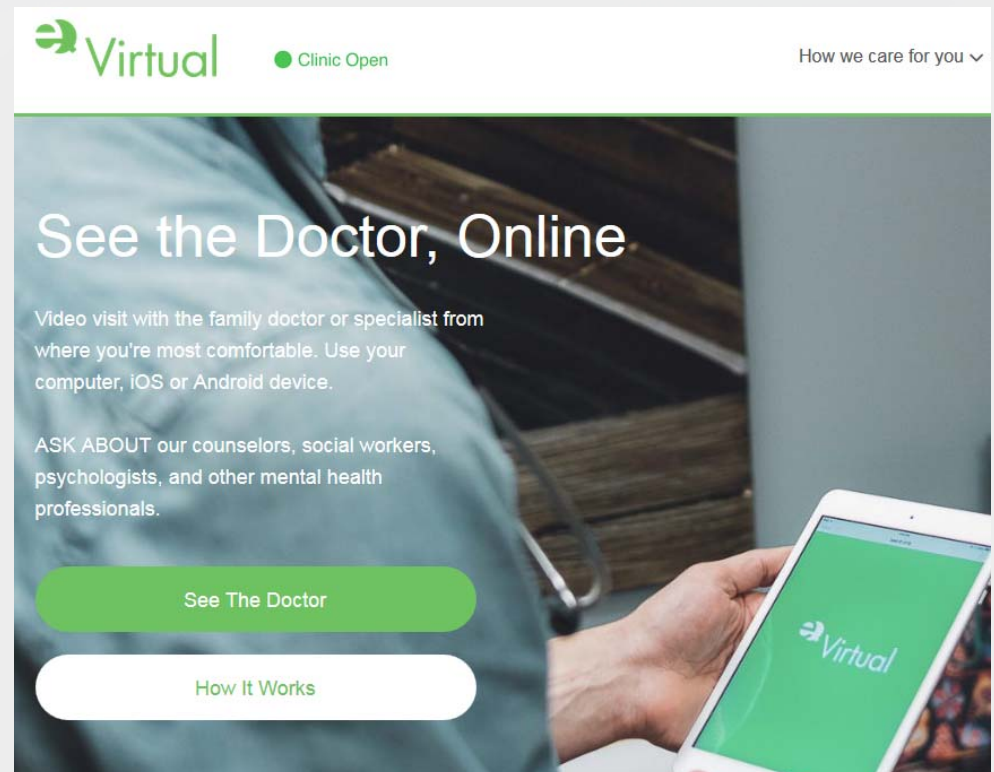
Forbes

JAN 20, 2017 @ 04:01 PM 2,739

Is 2017 The Year Of Telemedicine?

Alice LaPlante, CenturyLink

By definition, telemedicine is the practice of delivering medical care remotely using communications technology. Although it sounds like a modern advent, the foundation of this practice has been around since [the invention of the telephone](#) when doctors used to call their patients directly. By using more sophisticated technologies like videoconferencing, telemedicine will only continue to get more sophisticated as technology grows.



Virtual ● Clinic Open How we care for you ▾

See the Doctor, Online

Video visit with the family doctor or specialist from where you're most comfortable. Use your computer, iOS or Android device.

ASK ABOUT our counselors, social workers, psychologists, and other mental health professionals.

[See The Doctor](#)

[How It Works](#)

Which platforms should you use?



Factors to consider:

1. Audience
2. Type of information
3. Interaction
4. Monitoring
5. Does your facility allow?

1. Audience

How to find “your people”

- Browse online
 - keywords
- Ask them
 - Email
 - Survey/poll
 - (Literally) talk to them



Which platforms? (cont'd)

2. Type of information
 - Can it be condensed?
 - How permanent?
3. Interaction
 - Amount, ease
4. Monitoring for comments, questions
 - Time
 - Ease
 - Apps to help/notify
5. Allowed?
 - Some facilities block Facebook, some block Twitter

Use the communications channels that work for your audience(s)

- Consider their time/needs
- Email and websites are here to stay!

Global Biodefense @GlobalBioD
2 hours ago

"How Yemen's cholera outbreak spread to a half-million people" bit.ly/2wcbWGZ

CADTH @CADTH_ACMTS
2 hours ago

"We need to do the proper, definitive trials of surgical interventions where uncertainty about effectiveness exists." via [@joannesivertson](https://twitter.com/joannesivertson)

Onisillos Sekkides @Onisillos
When surgery is just a stitch-up
<https://t.co/90LCGEDhqj>

Global Biodefense @GlobalBioD
2 hours ago

Zika has all but disappeared in the Americas. Why? bit.ly/2wcku0s via [@sciencemagazine](https://twitter.com/sciencemagazine)



Barbara Catt @CattBarbCIC
17 hours ago · Georgina

Stresses the importance of surveillance

IPAC Canada @IPACCanada
RT @AntibioticResis: Detection of Rare Antimicrobial Resistance Profiles by Active and Passive Surveillance...
<https://t.co/QDXgQvUfTr>

Microbes&Infection @MicrobesInfect
15 hours ago

Mumbai, India, reports 558 cases of #malaria in 15 days - in part thought to be

Select the ones I think IPAC-Canada members will want/need

Weekly email news summary

Could post this to website



Your favourite things

- What sites/apps do you like?



- Learning curve



The social media rabbit hole



- Decide your purpose
- Plan your time



Still not sure?

- Asks colleagues who use social media **for the same purposes as you**

Inundated?



It's all getting a bit weird?



You can just ghost...




But before you g(h)o(st)...

- Tips and tricks

IPaC_orgs

CDC @CDCgov
2 hours ago

Now 173 people sick with Salmonella. Throw out Maradol papayas from Carica de Campeche farm in Mexico. go.usa.gov/xRvQn



51 retweets, 17 likes

AntibioticResistance @AntibioticResis
7 hours ago

Characterization of In Vitro Resistance Development to the Novel Echinocandin CD101 in Candida... dlvr.it/Pg9FwM #AMR #ABresistance

1 retweet, 1 like

AntibioticResistance @AntibioticResis
7 hours ago

A High-Throughput Approach To Identify Compounds That Impair Envelope Integrity in Escherichia... dlvr.it/Pg9Fvm #AMR

Journals List IPACCanada

JAMA_current retweeted

Ed Livingston @ehJAMA
1 hour ago

This weekend's @JAMA_current podcast: Are they safe? Drugs and devices receiving accelerated approval by the FDA traffic.libsyn.com/force-cdn/high...

7 retweets, 6 likes

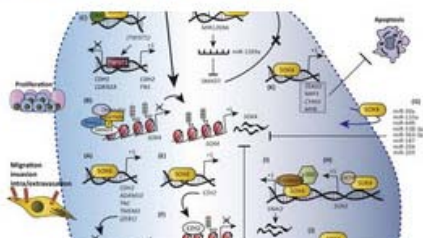
CellPressNews @CellPressNews
1 hour ago

Interested in #chemicalbiology? @CellChemBiol editor @MilkaKostic has a discussion group for you! #ACSDC bit.ly/2vSTTDn

2 retweets, 3 likes

CellPressNews @CellPressNews
1 hour ago

#SOX4 & #EMT. Lourenco & Coffier @UMCUtrecht bit.ly/2vST4KN



News List IPACCanada

EurekAlert! @EurekAlert
6 mins ago

A new method for the 3-D printing of living tissues eurekalert.org/e/7vq3 via @UniofOxford @EurekAlert #EurekAlertTrending

1 retweet, 1 like


HealthMap @healthmap
1 hour ago

2nd outbreak of Bird flu recorded in #Philippines - Xinhua Net ow.ly/KQ0T30evkjU

1 retweet, 1 like

Global Biodefense @GlobalBioD
1 hour ago

Human intrusion on fruit bat habitats raises exposure risk to Hendra virus in Australia bit.ly/2vSkP6f



NFPs List IPACCanada

CADTH_ACMTS retweeted

Jan Oldenburg @janoldenburg
1 hour ago

Perfect! @JMIR study found engaged patients drive and disseminate knowledge at health conferences--when included jmir.org/2017/8/e280/


7 retweets, 10 likes

dicon @DICON_duke
2 hours ago

Have an aspiring #publichealth professional in the family? Download @CDCgov Solve the Outbreak app @PublicHealth [cdc.gov/contactlenses/...](http://cdc.gov/contactlenses/)

WHO @WHO
14 hours ago

It's World Humanitarian Day. Health workers provide care & save lives in the midst of conflict or disasters. Health workers are #NotATarget



WHO @WHO
1 day ago

To contain the #measles outbreak in #Somalia, a vaccination campaign is planned for Nov., but funding is needed bit.ly/2vkZBqL



The story of a health communicator's life...

Article focus

- The use of social media in healthcare has been widely advocated, but there is little evidence describing the current state of the science and whether or not these tools can be used to benefit patient populations.
- We mapped the state of the existing literature evaluating the use of social media in patient and caregiver populations.

Key messages

- There is an extensive and rapidly growing body of literature available investigating the use of social media in patient and caregiver populations.
- Most studies have been descriptive; however, with such widespread use, evaluations of effectiveness are needed.
- In studies that have examined effectiveness, positive conclusions are often reported, despite the non-significant findings.

Strengths and limitations of this study

- Our search was comprehensive and we included an extensive body of literature, across conditions, populations and study designs.
- Social media is constantly evolving, leading to challenges in keeping the search updated.
- A more in-depth analysis is needed on specific topics, conditions and populations to guide the use and implementation of social media interventions.

Venci *et al*, Inclusion of social media-based strategies in a health care worker influenza immunization campaign

- Common misconceptions reported among HCWs include the belief that one can develop influenza from the vaccine, the belief that one is not at risk for influenza, and skepticism about vaccine effectiveness and safety
- Primary motivators for HCWs receiving vaccination during 2010-2011 but who did not in 2009-2010 (n = 172) were assessed in the point-of-vaccination questionnaire.
 - “Friends or co-workers” (28%) and the “hospital intranet” reminders (25%) were cited the most as motivators.
 - Only 1% of this group responded as having used the social media campaign pages directly.
- Unfortunately, due to institution firewall issues, the program was not able to solicit followers for Facebook and Twitter by employee e-mail.
 - This could have reduced the direct influence of the social media sites.
 - Therefore, it is difficult to assess the specific influence of social media on the slight increase in employee vaccination rates.
- **The social media outlets may have influenced HCWs indirectly**
- Almost one-third of vaccine recipients were motivated by their friends/ coworkers, some of whom may have been influenced by the social media.

Social media use among patients and caregivers: a scoping review (Hamm et al., 2013)

- A research librarian searched 11 databases in January 2012: Medline, CENTRAL, ERIC, PubMed, CINAHL Plus Full Text, Academic Search Complete, Alt Health Watch, Health Source, Communication and Mass Media Complete, Web of Knowledge and ProQuest. Dates were restricted to 2000 or later, corresponding to the advent of Web 2.0.
- Results: **Two hundred eighty-four studies** were included.
 - Discussion forums were highly prevalent and constitute 66.6% of the sample.
 - Social networking sites (14.8%) and blogs/microblogs (14.1%) were the next most commonly used tools.
- Conclusions: There is an extensive body of literature examining the use of social media in patient and caregiver populations. Much of this work is descriptive; however, with such widespread use, evaluations of effectiveness are required. **In studies that have examined effectiveness, positive conclusions are often reported, despite non-significant findings.**

Social media as a tool for antimicrobial stewardship (Pisano et al., 2016)

- **Aim:** to improve internal medicine residents' (IMR) knowledge of correct antimicrobial use and increase their uptake of clinical pathways and order sets through the use of social media.
- **Methodology:** The investigators enrolled 55 IMRs, and asked them to follow the hospital's antimicrobial stewardship program (ASP) on Facebook or Twitter for 6 months.
 - posted statements on the social media sites promoting the hospital's ASP website and clinical pathways, focusing on the pathway for community-acquired pneumonia.
 - posted and tweeted questions about antimicrobial prescribing.
 - residents were encouraged to respond, and answers were posted and tweeted by the research team the next business day
- Pretest and post-test surveys were completed by 39 IMRs
 - median scores for Abx knowledge increased from 12 (interquartile range, 8-13) to 13 (interquartile range, 11-15; $P = .048$)
 - IMRs knowing how to access the ASP website increased from 70% to 94%.
 - More IMRs indicated that they used the clinical pathways "sometimes, frequently, or always" after the intervention (33% vs 61%, $P = .004$)
- **Conclusions:** Social media is a valuable tool to reinforce ASP initiatives while encouraging the use of ASP resources to promote antimicrobial mindfulness.

Journal club: Social media as an antimicrobial stewardship tool (Conway & Knighton, 2017)

- These positive results are notable; however, it is **possible they were the result of maturation rather than the social media intervention**. ... **Without a control group**, it is difficult to sort out maturation effects from intervention effects.
- Despite the threat of maturation bias, this study is important because it **suggests a relatively simple and inexpensive method for raising awareness** of appropriate antimicrobial prescribing. As the authors point out, it is difficult to draw health care providers' attention to the prescribing tools that are available to them. Because social media platforms such as Facebook and Twitter exist to draw attention to issues, it would seem neglectful not to use them to educate and engage providers about antimicrobial stewardship.
- **There is no conclusive evidence that social media is effective for improving medical students' clinical performance. Similarly, there is no solid evidence that social media sites are more or less effective than traditional educational platforms.**
- However, **research has shown that medical students find Twitter and Facebook useful as supplements** to traditional educational strategies.
- **Practicing physicians and nurse practitioners also find social media acceptable for continuing education.**

Journal club: Social media as an antimicrobial stewardship tool (Conway & Knighton, 2017)

- Given this broad acceptance, could social media be used for other topics in infection control besides ASPs? A study by Pan et al suggest it could be. Pan et al **created a hand hygiene promotional video on YouTube and posted links** to it on their hospital website, employee e-mail list, and Facebook page.
- Their results showed that the **video was accessed most frequently on social media sites**. Fewer than 1% of website and e-mail subscribers opened the link, but 6% of Facebook subscribers opened it. Similarly, **only 12% of total views occurred via the hospital website and e-mail, whereas 38% occurred via Facebook, and 20% occurred via YouTube and Google searches**.
- The results suggest that compared with hospital Web sites and e-mail, Facebook is a more effective platform for disseminating infection control messages.

Review of Twitter for ID clinicians: Useful or a waste of time? (Goff, Kullar, & Newland, 2015)

- Twitter... is the only platform that allows one to connect, engage, learn, and educate oneself and others in real time on a global scale.
- HCPs are using social media tools to communicate, educate, and engage with their peers worldwide.
- Twitter allows HCPs to deliver easily accessible “real-time” clinical information on a global scale.
 - During an ID outbreak, acquiring information in real time is critical
 - MERS-CoV, enterovirus D68, Ebola
- Twitter has become a daily part of many HCPs’ lives, allowing them to communicate real-time healthcare information and medical alerts to a large global audience, including those who are considered experts or thought leaders in a particular field, and to solicit feedback.
- The “always-on” culture of today is accustomed to bite-sized, on-demand learning. This type of learning transitions to medical trainees who have grown up with computers, smartphones, iPads, and Wi-Fi.
- Many HCPs outside the United States do not have free access to journals, so a tweet that provides a link to a compelling new article is a great way to educate peers and share information

The throw-down

- Prevention and control of infectious diseases suffer from deficient compliance with preventive measures or guidelines of both professionals and general audience.
- This poses a threat to public health.
- Current approaches to prevent risk behavior are in need of innovation. Fresh approaches to education, information and communication are needed.

Ossebaard, H. (2011). ePublic health: Fresh approaches to infection prevention and control. *eTELEMED 2011, The ...*, (c), 27–36. Retrieved from http://www.thinkmind.org/index.php?view=article&articleid=etelemed_2011_2_10_40051

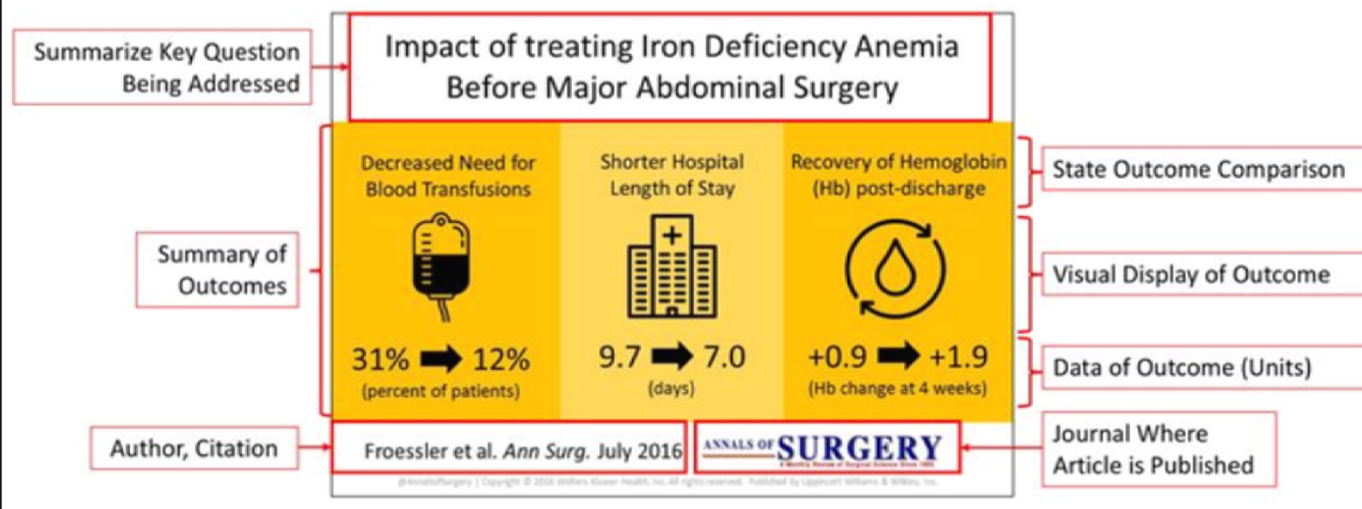
Reminders vs Nagging



<http://www.onlinemastersinpublichealth.com/powerfully-creative-hand-hygiene-ads/>

The visual generation

COMPONENTS OF AN EFFECTIVE VISUAL ABSTRACT



SCIENCE
The Microbes on the Handprint of an 8-Year-Old After Playing Outside
Christopher Jobson on June 7, 2015



JICR

Journal of Interferon & Cytokine Research

Interactions Between NS1 of Influenza A Viruses and Interferon- α/β : Determinants for Vaccine Development

To cite this article:

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ABSTRACT

Influenza A viruses (IAVs) cause mild to severe infections in humans with considerable socioeconomic and global health consequences. The host interferon (IFN)- α/β response, critical as the first line of defense against foreign pathogens, is induced upon detection of IAV genomic RNA in infected cells by host innate pattern recognition receptors. IFN- α/β production and subsequent activation of cell signaling result in the expression of antiviral IFN-stimulated genes whose products target various stages of the IAV life cycle to inhibit viral replication and the spread of infection and establish an antiviral state. IAVs, however, encode a multifunctional virulence factor, nonstructural protein 1 (NS1), that directly antagonizes the host IFN- α/β response to support viral replication. In this review, we highlight the mechanisms by which NS1 suppresses IFN- α/β production and subsequent cell signaling, and consider, therefore, the potential for recombinant IAVs lacking NS1 to be used as live-attenuated vaccines.

Teleclass	SOCIAL MEDIA: USELESS OR USEFUL IN INFECTION PREVENTION? <i>(FREE Teleclass)</i>
Outline:	Objectives: - Define social media - Summarize current applications of social media in infection prevention - Critique the role of social media using published studies to ascertain utility of social media in infection prevention
Date	August 24, 2017
Live broadcast time	10:30am-11:30am in Vancouver/Seattle/Los Angeles 1:30pm-2:30pm in New York / Toronto 7:30pm in Geneva 3:30am (August 25) in Sidney 2:30pm in Buenos Aires 8:30pm in Riyadh
Presenter:	Helen Evans , IPAC Canada National Social Media Manager
Register at:	https://webbertraining.com/schedulep1.php?command=viewClass&ID=135 Quicklink: http://bit.ly/2w67v0x
Participant poll:	Please complete an anonymous, 2-question poll prior to the teleclass: http://fluidsurveys.com/surveys/picnet/social-media-poll/

In summary

- Social Media users: they're there already (3bn!)
- Have a plan:
 - Decide your purpose
 - Try it out, see what works (+ tools/apps to help)
 - Time management #TheRabbitHoleIsReal
- Cross-pollination
 - Possibility, potential, power!
 - Consider multiple audiences (now and later)
 - Make use of your #SoMe hotshots
- Point back to one central place
 - Blinked, they missed it? Find it!
- Policy/disclaimers

Questions, contact

Twitter: @IPACCanada @wordwired

<https://ipac-canada.org/>

Email: helen.evans@phsa.ca



Old school



So am I



99% guaranteed
response
(Hotmail → spam
filter)

Even more old-school:
604-875-4844 x 22984



Homework

- Didn't complete the poll? Please (still) do!
<http://fluidsurveys.com/surveys/picnet/social-media-poll>
(Poll will stay open indefinitely; results will be regularly tweeted out via @IPACCanada #Webber)
- **Do** check this out: NHS Behind the Headlines
 - <http://www.nhs.uk/News/Pages/NewsArticles.aspx> and <http://www.nhs.uk/news/Pages/about-behind-the-headlines.aspx>
- If you haven't yet heard of **#VisualAbstracts**:
 - A Primer on How to Create a Visual Abstract
https://static1.squarespace.com/static/535bcb2fe4b05fe61b320c51/t/586fe712bebafb8c864f28f0/1483728662763/VisualAbstract_Primer1.pdf
 - Ibrahim, A. M., Lillemoe, K. D., Klingensmith, M. E., & Dimik, J. B. (2017). **Visual Abstracts to Disseminate Research on Social Media: a prospective, case-control crossover study**. *Annals of Surgery*, XX(Xx), 3–5. <https://doi.org/10.1097/SLA.0000000000002277>
- [Paul Webber: recipient of 2017 Moira Walker Award for International Service](#)

September 14, 2017 [RELATIONSHIP BETWEEN PATIENT SAFETY CLIMATE AND ADHERENCE TO STANDARD PRECAUTIONS](#)
Speaker: **Dr. Amanda Hessels**, Ann May Center for Nursing, Columbia University

September 18, 2017 [\(FREE European Teleclass - Broadcast live from the 2017 IPS conference\)](#)
[Cottrell Lecture ... IGNITING PASSION, SPARKING IMPROVEMENT](#)
Speaker: **Julie Storr**, World Health Organization

September 20, 2017 [\(FREE European Teleclass - Broadcast live from the 2017 IPS conference\)](#)
[Ayliffe Lecture ... PREVENTING ANTIBIOTIC RESISTANCE AND IMPROVING PATIENT SAFETY IN INFECTION](#)
Speaker: **Prof. Anand Jay Saint**, University of Michigan Medical School

**REMOVED BY REQUEST
(hopefully to be replaced shortly)**

September 28, 2017 [HOW TO PUBLISH IN THE JOURNALS AND WHY IT MATTERS](#)
Speaker: **Prof. Elaine Larson**, Columbia University, Mailman School of Public Health

October 5, 2017 [\(FREE Teleclass\)](#)
[INFECTION CONTROL GUIDELINES THAT DID NOT WORK AGAINST EBOLA](#)
Speaker: **Prof. Bjørg Marit Andersen**, Oslo University Hospital

October 12, 2017 [\(FREE Teleclass\)](#)
[STRENGTHENING IPAC STRUCTURES THROUGH EDUCATION IN LOW-INCOME OR MIDDLE-INCOME COUNTRIES](#)
Speaker: **Prof. Shaheen Mehtar**, Infection Control Africa Network, and Stellenbosch

Thanks to Teleclass Education
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