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Sexual Health

Supplementary Material

Characterisation of social media conversations on syphilis: an unobtrusive observational study

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Supplementary material

Supplementary Table S1: Content categories used to classify tweets, adapted from the definitions developed and used in a study by Chew et al.*

Category**	Definition
Medical resource	Tweet contains syphilis updates, news, or information of medical nature. Could be title or summary of linked article. Contents may or may not be factual.
Non-medical resource	Tweet contains syphilis updates, news, or information of a non-medical nature. Could be title or summary of linked article. Contents may or may not be factual.
Personal experience	The author mentions a direct (personal) or indirect (friend, family, co-worker) experience with syphilis.
Public conversation	Tweet contains the authors opinion about syphilis or expresses interest in discovery of more information. General discourse or commentary about syphilis.
Joke	Tweet contains a joke about syphilis told via text, video, or photo. May be a humorous opinion of syphilis. Tweet may suggest a person or persons have contracted syphilis when it is not widely believed to be the case.
Medical question	Tweet asks a question or contains a question mark and is medical in nature.
Non-medical question	Tweet asks a question or contains a question mark and is not medical in nature.
Spam	Tweet is unrelated to syphilis.
Testing advertisement	Tweet encourages readers to get tested for syphilis, may contain information about a testing clinic.

*Chew C, Eysenbach G. Pandemics in the age of Twitter: content analysis of Tweets during the 2009 H1N1 outbreak. PloS One 2010;5(11):e14118.

** In the event of apparent overlap between categories, the category was decided on the basis of the predominant theme.

Supplementary Table S2: Ten most active authors posting medical resource tweets about syphilis on Twitter in 2019 (based on analysis of 11,113 tweets, representing a 10% sample of all tweets).

Author username	Author biographical statement	Number of tweets
HIV Insight	HIV, AIDS, STI, STD, HPV, Sexuality, LGBT, et al. Also @Hlth_Literacy, @Prison_Health, @Sex_Worker_Hlth. As an Amazon Associate I earn from qualifying purchases	34
Yours Naturally Health Solutions	http://www.yours-naturally.com	31
Trip Guidelines	The latest clinical guidelines, added to the Trip Database. Tweets are not endorsements.	17
CDC STD	Helping people to be safer and healthier by the prevention of STDs and their complications. Following/being followed/RT ≠ endorsement.	15
Caduceus Medica	NA	8
Libracin Ph	Deal on all kind of health defect ranging from infectious, blood related, tissue related, bone related, skin related issues..09060340534	7
Health Literacy	Eclectic health info, Health Literacy Also @HIV_Insight @Prison_Health, @Why_We_Do_That, @Sex_Worker_Hlth	6
NACCHO	National Association of County and City Health Officials (NACCHO) is the national organization representing local #publichealth departments. RTs ≠ endorsements.	6
PP Advocates AZ	This channel is paid for in part by Planned Parenthood Votes, 123 William St., NY, NY 10038. Not authorized by any candidate or candidate committee.	6
Robert Herriman (Outbreak News Today)	#Microbiologist, #podcast host and #blogger #Christian #liberty #news #outbreaks #Independent	6

Abbreviations: NA = tweet author did not have a biographical statement

Supplementary Table S3: Ten most engaging medical resource tweets about syphilis on Twitter in 2019 (based on analysis of 11,113 tweets, representing a 10% sample of all tweets).

Tweet	Author username	Number of retweets	Number of likes	Total engagement
LONG BEACH STD REPORT: Since 2013, chlamydia rate increased by 88%, syphilis by 143% and gonorrhea increased by 267% https://t.co/8dkFoqqdUt	ABC7 Eyewitness News	695	663	1,358
While the risk of getting HIV from oral sex is small, you should be worried about getting throat cancer, oral cancer from HPV, Gonorrhea, Syphilis, Herpes, not the Hermes kind. Cut that condom into a square, place it over the p**ssy. That's how you protect yourself. https://t.co/6QpwE5oJTG	Aproko Doctor	262	685	947
Malaria was once used to treat syphilis. People with syphilis would be injected with malaria-infected blood, causing an extremely high fever that would subsequently kill the disease. The treatment was used until the discovery of penicillin.	UberFacts	139	581	720
I wrote this for @NYTStyles on STIs and stigma. Rates of gonorrhea and syphilis are □ HIV is static. Rates should be falling. We could make sexual HIV transmission almost 0%. But we have to be able to talk about it openly and without judgement https://t.co/rZ6Cdfmbbf	Jennifer Gunter	119	335	454
Look after your sexual health! Use PrEP and condoms to ensure full protection for yourself and your partner. PrEP will protect you from HIV while condoms will protect you from HIV and other sexually transmitted infections such as gonorrhoea and syphilis. https://t.co/pDeqV6Xgv0	World Health Organization Philippines	156	264	420
A condom is the most effective means for safe sex. But what if you don't use a condom? Pre-Exposure Prophylaxis(PrEP) can be used if you are HIVneg to help prevent transmission by 99% Doxycycline can be used to fight against chlamydia, gonorrhoea & syphilis. #TalkToYourDoctor https://t.co/ikkzMPnFck	LoveAmyPond	28	356	384

<p>A symbol of hope and faith! 🌸 Blue #iris is a symbol of hope and faith, while yellow Iris represents passion. Irises have also a medicinal history..... The Irises roots were being used to treat skin diseases, syphilis and stomach problem. #LoveFlowers #Flowers https://t.co/dGmVISv1Ly</p>	World Love Flowers	117	261	378
<p>Louisiana ranks second for new cases of chlamydia, fifth for gonorrhea and seventh for early-stage syphilis, the report said. https://t.co/rPdtF4br9m</p>	NOLA.com	224	142	366
<p>I'd make a crack about how closing Planned Parenthood clinics was a bad idea, but this is actually what religious conservatives were hoping would happen. https://t.co/J5pKoYTcdH</p>	Amanda Marcotte	80	177	257
<p>Since 2000, rates of chlamydia have nearly doubled. Rates of syphilis have more than quadrupled</p>	The Economist	93	155	248