



A quarterly newsletter detailing poultry related work, research, and events in California

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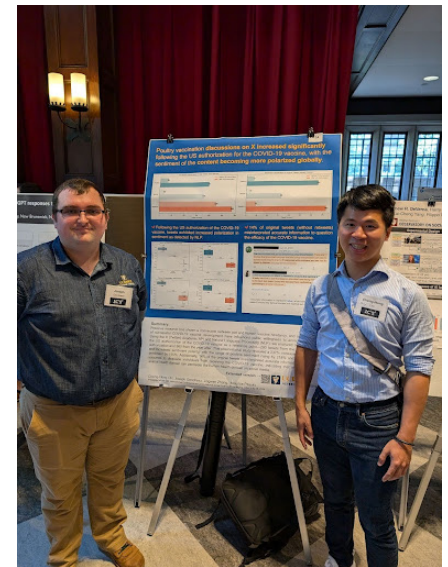
Exploring the Link between Poultry and Human Vaccine Hesitancy through Social Media Analysis



Mr. Cheng-Hong CHI (Philip) ,DVM, MPVM, PhD Student, UC Davis School of Veterinary Medicine Cooperative Extension Poultry Lab

Vaccine hesitancy has emerged as a significant public health concern affecting not only human populations but also extending to the realm of pet and animal health. Social media platforms like X (formerly Twitter) play a key role in the spread of both information and misinformation regarding vaccines. Recognizing the need to explore this phenomenon, Cheng-Hong Chi (Philip), a PhD student in the Graduate Group of Epidemiology, has undertaken an innovative project that examines the connection between poultry and human vaccine hesitancy using advanced computational tools.

Leveraging the Twitter Academic API and Natural Language Processing (NLP), Philip analyzed 945 tweets to investigate how announcements of successful COVID-19 vaccine development influenced public sentiment toward poultry vaccinations. Using the U.S. authorization of the COVID-19 vaccine as a reference point, he collected 280 tweets from the year before the authorization and 665 tweets from the year after.



Philip and Joseph presenting the research at the 10th International Conference on Computational Social Science in Philadelphia



Questions or Comments?

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Poultry? We have an app for that!

Backyard Poultry Central is your hub for the latest information on husbandry practices for new and experienced backyard owners. Get notified of outbreaks as soon as they happen, and receive critical information at your fingertips.

Download the "Backyard Poultry Central" app on the Google Play Store



Exploring the Link continued

Significant Findings Through Computational Analysis

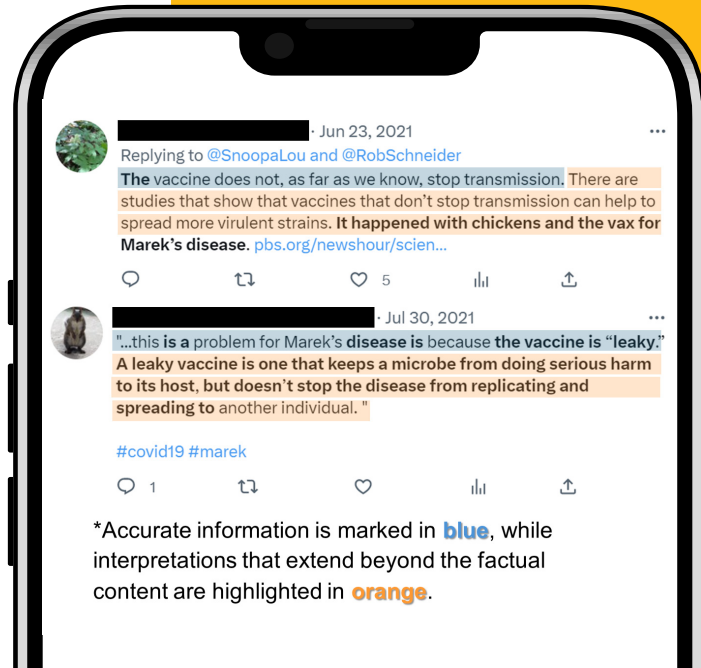
The observational study revealed a staggering 237% increase in tweet volume after the vaccine's authorization. Sentiment analysis showed increased polarity, with the range of positive sentiments rising by 218% and negative sentiments by 115%. This indicates that public opinions became more extreme—both positively and negatively—following the COVID-19 vaccine's introduction.

One particularly notable finding was that 14% of original tweets misinterpreted accurate information about poultry vaccines, using it to dissuade people from receiving the COVID-19 vaccine. This crossover of misinformation from the animal health domain into human health discussions highlights the interconnectedness of these issues on social media.

Implications for Public Health and Communication Strategies

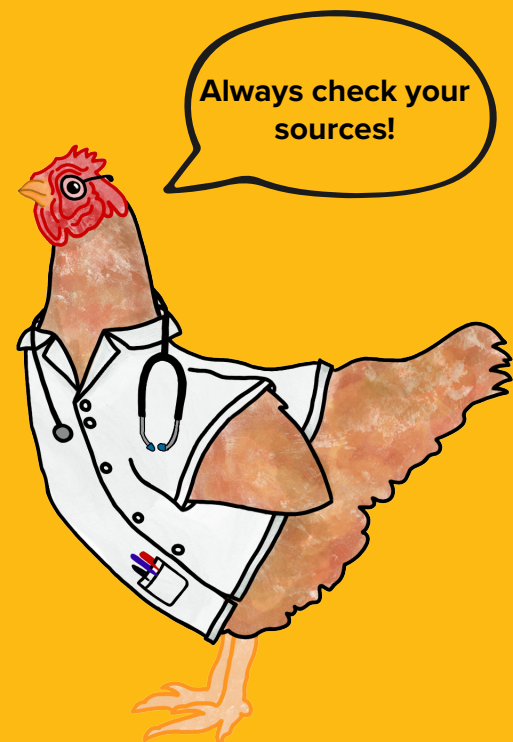
Philip's research underscores the importance of monitoring social media to address vaccine hesitancy more effectively. The misinterpretation of animal vaccine information to influence human vaccine decisions suggests that public health communication strategies need to be more nuanced and targeted.

"Understanding how information flows between pet and human health domains can help us develop better strategies to combat misinformation," Philip explains. "By identifying the sources and nature of this misinformation, we can work towards creating more effective educational campaigns to combat vaccine hesitancy."



*Accurate information is marked in **blue**, while interpretations that extend beyond the factual content are highlighted in **orange**.

Example of some tweets misunderstood accurate information about poultry vaccines and used it to discourage people from getting the COVID-19 vaccine.



Tracking Waterfowl

UC Davis Animal Biology Graduate Group Colloquium

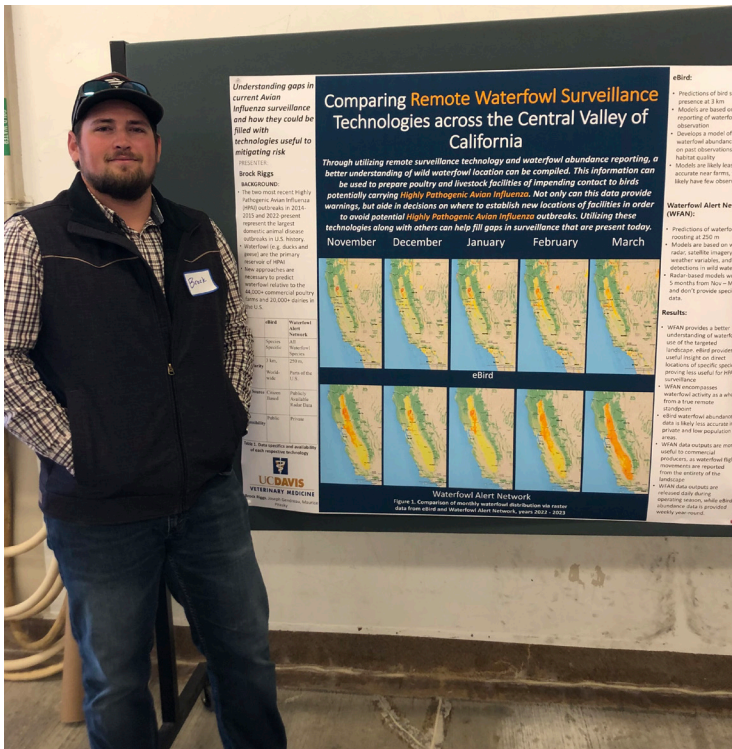


Mr. Brock Riggs, Research Assistant, UC Davis School of Veterinary Medicine, Cooperative Extension Poultry Lab

Avian Influenza is an ever-present threat. This virus has attacked the commercial poultry industry alongside backyard hobbyists raising chickens since 2014, and remains a hot-button topic across the nation. Now, avian influenza has trickled into dairy cattle, sparking a major concern in a novel area. Mr. Brock Riggs had the pleasure of presenting “Comparing Remote Waterfowl Surveillance Technologies across the Central Valley of California” at the UC Davis Animal Biology Graduate Group Colloquium, and the interest was highly noticeable among those working with the dairy industry. People are very concerned with how avian influenza may impact their work, and rightfully so. Especially now that Avian Influenza has impacted multiple U.S. food industries.

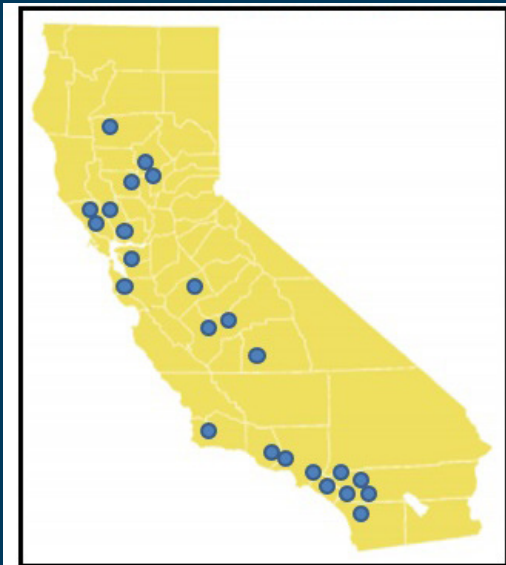


The poster had a high level of interest and in result, the presentation time resulted in great exposure of the need for upgraded waterfowl surveillance to fill the blanks that are currently present in avian influenza surveillance. Mr. Riggs hopes that in near future, his work in this area within the Cooperative Extension (CE) Poultry Lab will continue to have a positive outcome on those concerned with avian influenza, and how they can help avoid the potential outbreaks.



Brock presenting his research at the UC Davis Animal Biology Graduate Group Colloquium

Be a part of our Census!



Make Sure Your Poultry are Represented!

Note: As veterinarians at UC Davis our interest is in working with Backyard poultry and their owners to improve poultry health. The data in this survey is strictly for outreach purposes. We want to work with you. We are a university not a regulatory agency and therefore our focus is on outreach and education and not regulation and enforcement.

Waterfowl Wordsearch

How many do you know?

Bufflehead
Gadwall
Scoter
Goose
Merganser
Pintail
Brant

M S Q S B D M T Z H
A C D W U U E E L G
L R P A F C R A S A
L E I N F K G L C D
A A N B L G A W O W
R M T R E O N I T A
D E A A H O S G E L
P R I N E S E E R L
K S L T A E R O N T
C O O T D G B N T E

Mallard
Wigeon
Screamer
Duck
Teal
Coot
Swan

Have you seen our series, ‘The Sitch’?

Sit down with Dr. Maurice Pitesky as he answers the most common questions for new and experienced backyard poultry owners alike. Get insightful and accurate information on the best practices for raising your own birds.

Visit our channel at:

<https://www.youtube.com/c/ucdpiteskylab>

