

Introduction

Background: Seventy-three percent of adults use social networking sites (SNS) daily in the United States. The SNS, Twitter, attracts users 18 to 29 years old and are mostly African American and Hispanic. These users are a challenging population to reach in public health, making Twitter an ideal resource for public health organizations to focus their efforts. While public health organizations are adapting to the current social media trends, the current research being conducted focuses primarily on organizations and excludes how individual public health professionals are using their personal Twitter accounts to disseminate health information.

Objective: To evaluate how public health professionals are furthering the mission of public health outside of a public health organization through tweets.

Methods

- We employed Roger's Diffusion of Innovation Model to examine the diffusion of health related material on Twitter
- Specifically, public health professionals belong to two categories under Roger's Model: Innovators and Early Adopters
- Their authority on the subject gives public health professionals a large influence on other's decisions to adopt health information

Participants were chosen through Twitter's search function using the term "public health." After individuals were identified as being a public health professional or worker, participants were chosen based on a set of inclusion and exclusion criteria. Overall, 220 public health professionals were chosen to examine their tweets during a three month time period. A total of 15,236 were collected and then analyzed using the constant comparison method.

Results

Table 1. Tweet Categories of Public Health Professionals

Tweet Category	Number of Tweets
Non-Public Health Related	4032
Health Nutrition	2008
Other	1885
Conference/Forum/APHA	815
Ebola	789
Non-Infectious Diseases	728
ACA/ Healthcare	627
Violence/Safety/Social Justice	626
Health Law & Policy	567
Technology/Innovation	553
Environmental Health/Factors	380
Charity/Organizations/NPO	346
Vaccines	250
Education & Literacy	233
Global Famine/Water	196
Emergency/ Emergency Preparedness	176
Global Poverty/Homelessness	170
Infectious Diseases	158
Mental Health	156
HIV/AIDS	143
Smoking/Tobacco/Marijuana	143
Medications/Drugs & Alcohol	143
Influenza	112
Total	15236

Results cont.

Table 2. Tweet Themes of Public Health Professionals and Underlying Categories

Informing/ Education	Monitoring Health Status/Trends	Social Justice	Professional Development
Ebola	HIV/AIDS	Global Poverty/ Homelessness	Ebola
HIV/AIDS	Health & Nutrition	Global Famine/ Water	Conference/ Forum/ APHA
ACA/Healthcare	Influenza	Charity/ Organizations/AP HA	
Health Law & Policy	Smoking/Tobacco / Marijuana	Education & Literacy	
Emergency/ Emergency Preparedness	Technology/ Innovation	Mental Health	
Environmental Health Factors	Infectious Diseases	Violence/ Safety/ Social Justice	
Health & Nutrition	Non-Infectious Diseases	Non-Public Health Related	

Conclusions

- Public health professionals are informing and education the public, monitoring health statuses and trends, advocating for social justice and using Twitter as a form of professional development.
- Public health professionals are innovators and early adopters
 - Number of followers shows how far the information was disseminated
 - Number of retweets show how many they got to adopt that information
- Opportunities for adoption is limited as many public health organizations block social media websites.
 - Prohibits workers from updating the general population during real-time public health updates
 - Relies on public health professionals to disseminate information on their own time
- The use of Twitter as a way of professional development is unique and innovative altogether.
 - Traditional way of networking and professional development includes attending conferences, forums, etc.
 - Social media can broadcast these events live, eliminating boundaries of attending these events in person
 - Also allows the general public access to scientific information