Media Monitoring

Will Schulz | 8th June 2017

Vaccine Confidence Project

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THE VACCINE CONFIDENCE PROJECT
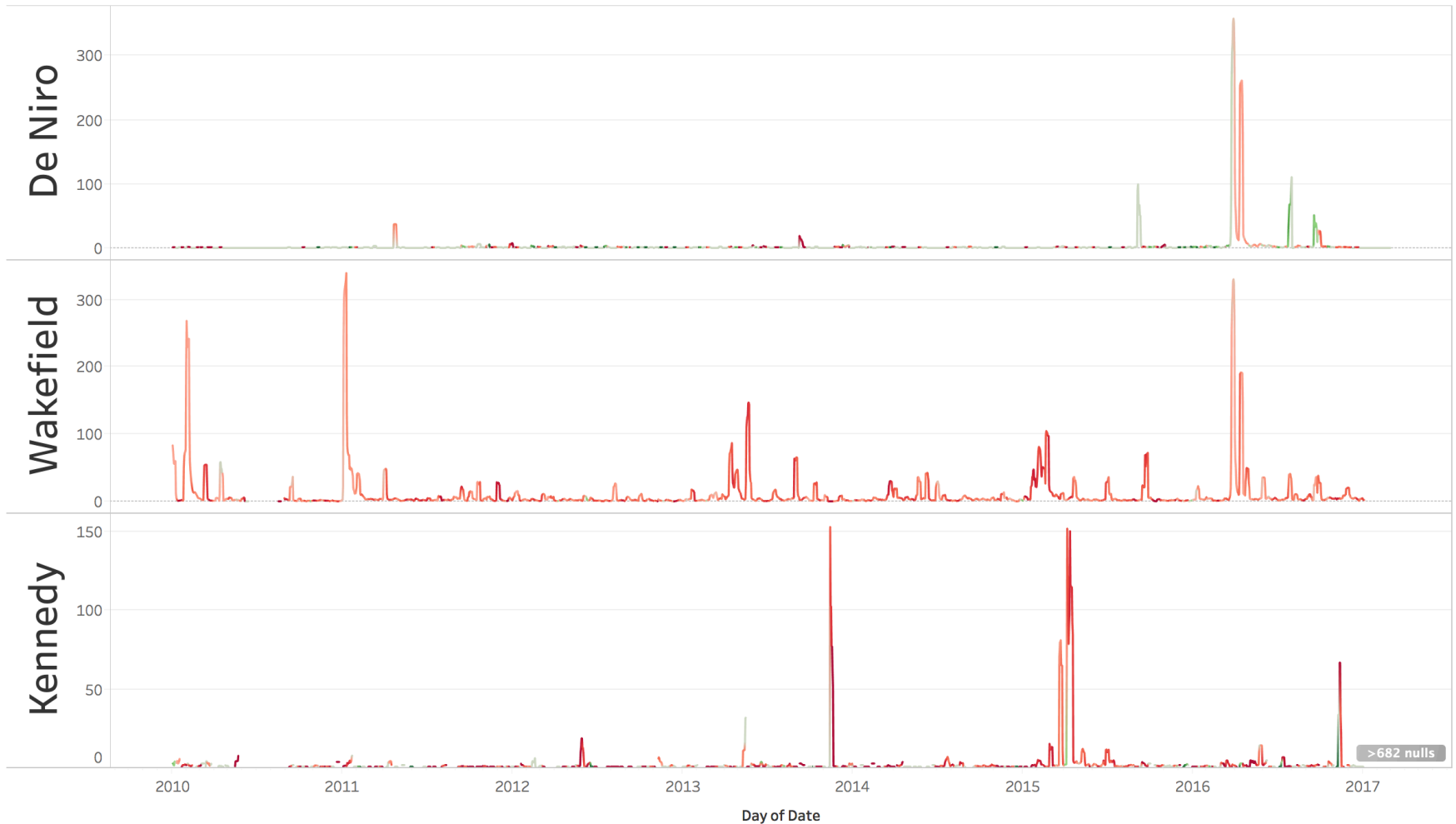
LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Media Monitoring

- News media: What are journalists reporting? What are the public reading?

- Social media: What are users sharing/reading?

- Events and perceptions

- Uses:
  - Event detection: Seize opportunities to jump on a trending topic
  - Response calibration: Worth refuting or not?
  - Impact evaluation: Analyze the effectiveness of a campaign over time
  - Network analysis: Potential basis for audience segmentation
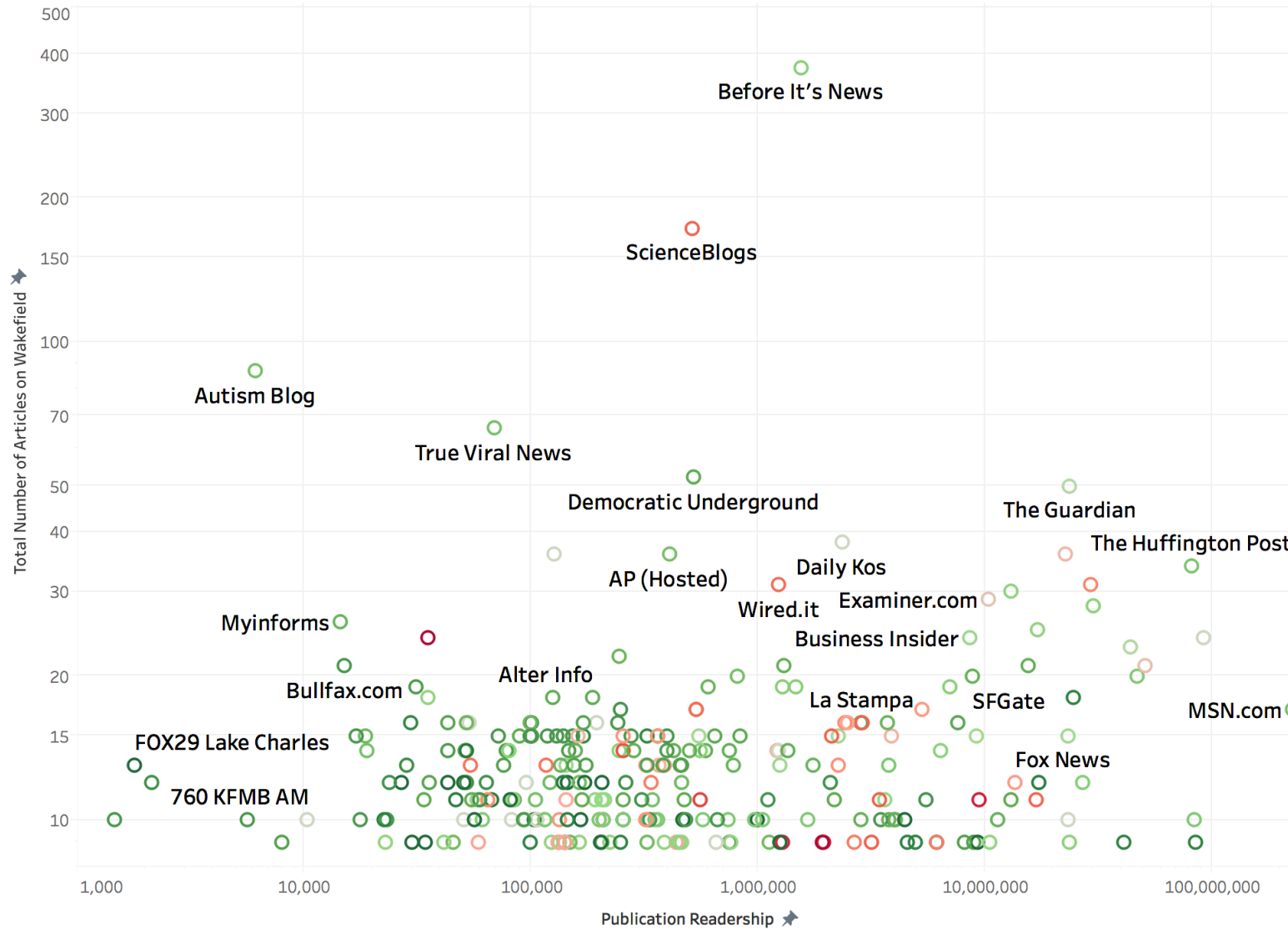
Monitoring & Detection

Comparing Levels of Coverage Over Time

Data source: Meltwater

Publication Attributes – Raw Numbers

Data source: Meltwater

Publication Attributes - Logarithm Transformed

Sentiment Score 3
0.000   1.000

Before It's News
ScienceBlogs
Autism Blog
True Viral News
Democratic Underground
The Guardian
The Huffington Post
Daily Kos
AP (Hosted)
Wired.it
Examiner.com
Myinforms
Business Insider
Alter Info
Bullfax.com
La Stampa
SFGate
MSN.com
FOX29 Lake Charles
Fox News
760 KFMB AM

Total Number of Articles on Wakefield
Publication Readership

Data source: Meltwater

WAKEFIELD
515 ARTICLES

VACCINE
54,403 ARTICLES

AUTISM
51,332 ARTICLES

■ VACCINE 54,403 ARTICLES
■ AUTISM 51,332 ARTICLES
■ WAKEFIELD 515 ARTICLES
■ VACCINE & AUTISM NOT WAKEFIELD 1,035 ARTICLES
■ VACCINE & WAKEFIELD NOT AUTISM 350 ARTICLES
■ AUTISM & WAKEFIELD NOT VACCINE 285 ARTICLES
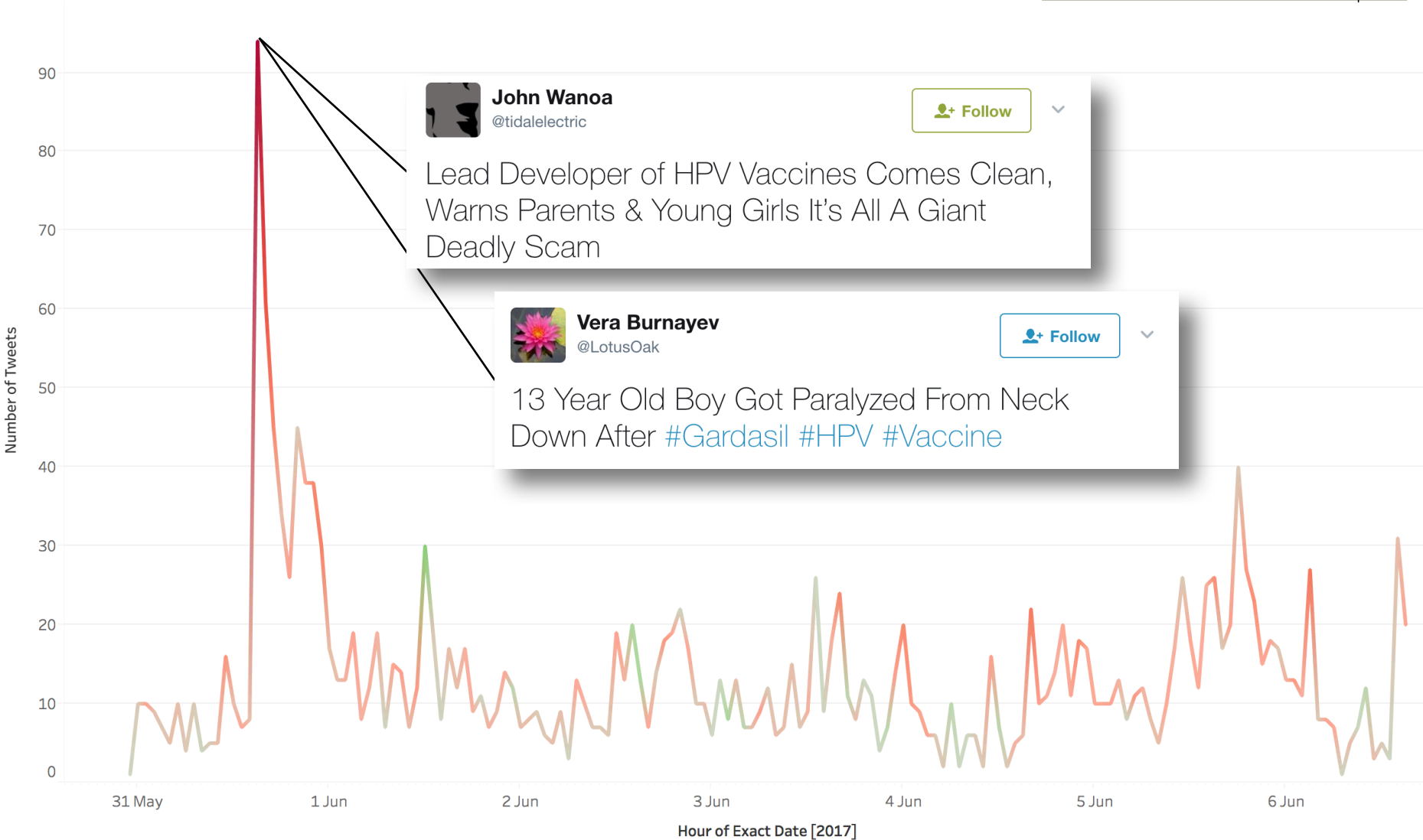■ VACCINE & AUTISM & WAKEFIELD 263 ARTICLES

6

Data source: Meltwater

Interpretations of Social Media

Real World

Activity on social media is a *reflection* of real-world health beliefs/behaviours

REPRESENTATION

Social Media

PARTICIPATION

Activity on social media has *causal impacts* on real-world health behaviours

Anders O Larsson & Hallvard Moe. 2013. "Representation or Participation: Twitter use during the 2011 Danish election campaign." Javnost 20(1): 71-88.

Tweets: (HPV) AND (vaccin*)

Data source: Meltwater

Tweets: (HPV) AND (vaccin*)

Sentiment Score: -40 to 6
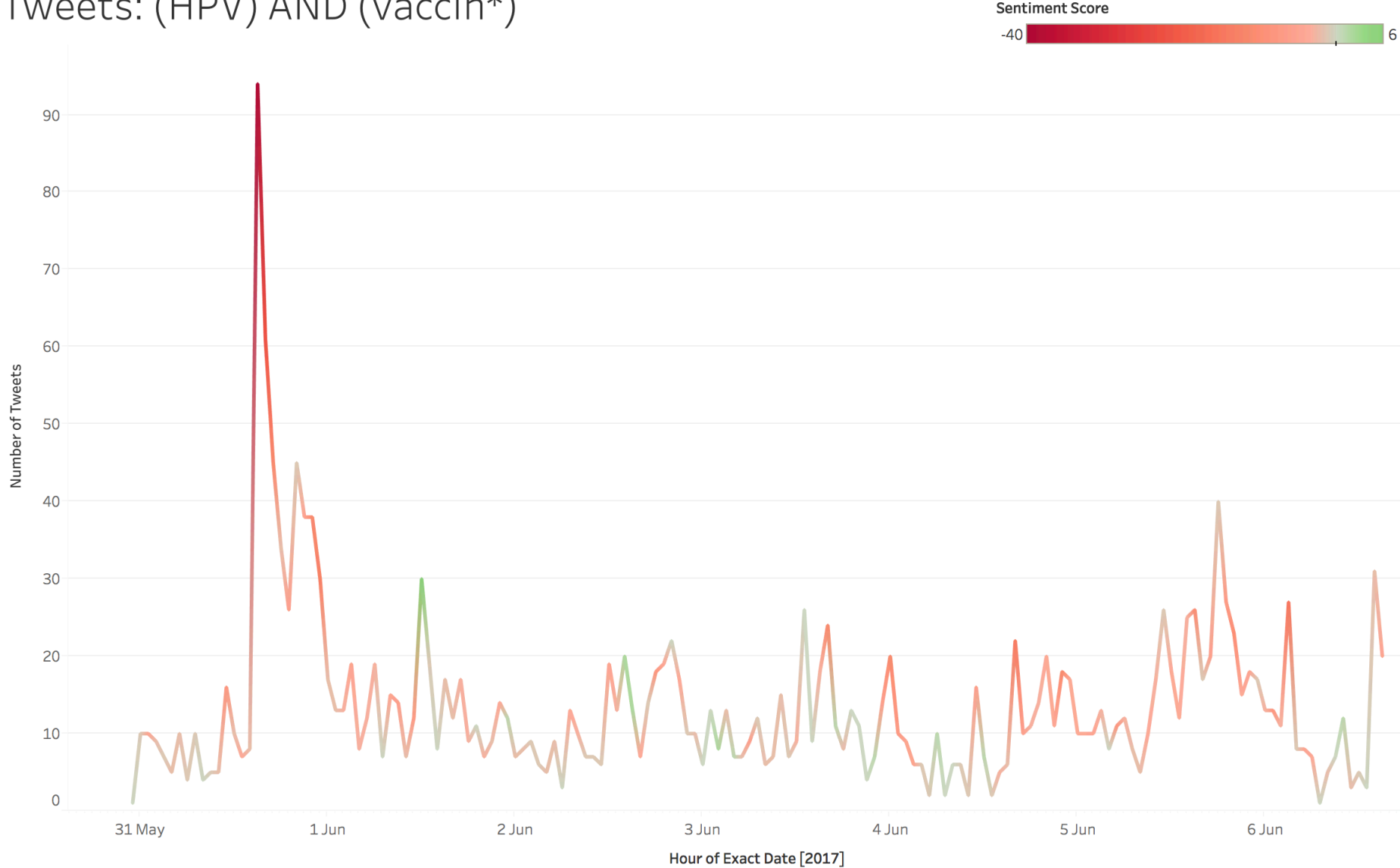
John Wanoa @tidalelectric

Lead Developer of HPV Vaccines Comes Clean, Warns Parents & Young Girls It's All A Giant Deadly Scam

Vera Burnayev @LotusOak

13 Year Old Boy Got Paralyzed From Neck Down After #Gardasil #HPV #Vaccine

Number of Tweets — Hour of Exact Date [2017]

9

False Negatives

ClinRev @ClinRev · May 25 · 3:00 pm

Since 90% of **HPV**-positive oropharynx #cancers are caused by #**HPV** type 16, could **vaccination** have an impact?

Negative ○

Donald Tucker @DonaldT14366482 · May 29 · 12:34 pm

RT @HowardFarran: Head, neck cancers linked to human papillomavirus. Study finds 93% of **HPV**-caused cancers preventable with **vaccine**. https:…

Reach 21

Negative ○

Dentistry Library @UofTDentLib · CAN · Jun 1 · 1:20 pm

#DentalNews @DentalTribuneIn **HPV vaccination** may lower risk of oral infections that cause mouth cancer https://t.co/JZvCm9DP9C

Reach 2k

Negative ○

False Positives

Data source: Meltwater

Sentiment Analysis Error Rates

Data source: Meltwater; Analysis: Will Schulz. Note: exploratory analysis only, should be interpreted as an example.

Patterns in SA Errors

- False negatives: descriptions of the diseases the vaccine prevents, angry pro-vaccine responses to anti-vaccine messages

- False positives: No obvious pattern

What to do with this information?

- Keep an ear to the ground, detect issues sooner, respond faster and smarter

- Contextualise the issue we're studying

- Segment audience based on observed groupings

- Intervene directly online? Risk-benefit ratio probably unfavourable.

Thank You