

PULSAR\*



# Using Pulsar to research, monitor & understand global health topics

Case Study – RREAL

# Using Pulsar to research, monitor & understand global health topics

## Challenge

Digital epidemiology expert Sam Martin has been using Pulsar as part of her research with Oxford University's Ethox Centre and UCL's RREAL (Rapid Research, Evaluation and Appraisal Lab). She has been advising the NHS and NIHR (National Institute for Health and Care Research) on anti-vaccine sentiments and vaccine hesitancy among healthcare professionals.

"Rather than only interviewing a bunch of healthcare workers, we use Pulsar to see exactly what they're sharing on social media to different audiences and how that compares to what official health organizations have shared with the researchers." Sam needs to be able to have swift access to historic data for clients: "these projects need not only look in real-time, but to look back across the whole pandemic, which Pulsar can do instantly."

She sees Pulsar as "a visionary tool to look at the different themes and sentiments with what's been going on, especially related to public health."

## Research Solutions

To get into the data behind anti-vax sentiments in healthcare professionals, Sam was first "able to use Pulsar's bio keyword filter to find nurses, midwives, doctors, GPs and all variations of healthcare professions in the UK discussing this."



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Dr Sam Martin  
Digital Analytics  
Consultant  
Ethox Centre, RREAL



She then “found it easy to go into the platform and use the tagging feature to create categories and visualise the keywords themselves around sentiment and emotion” surrounding Covid-19 vaccines.

Using the function, Sam noticed two main anti-vax health professionals using hashtags to share disinformation or misinformation (with and without malice): #InformedConsent and #LearnTheRisk. Sam’s team then used Pulsar to look at their rise on Twitter, Instagram and Reddit from December 2020 to August 2021 and was able to show how some healthcare professionals were using the hashtag to link to the concepts of vaccine passports, conspiracy theories and bodily autonomy.

A particularly notable hashtag, #Nuremberg2, was being used in conjunction with anti-vax hashtags to spread disinformation that vaccines were being used to mandate experiments on the whole of humanity. What was most concerning to Sam was that Pulsar’s analysis showed that hashtags from alt right campaigners in the US were finding their way into anti-vax discourse in the UK.

“These hashtags were infecting the UK like a hashtag virus,” she says. “It’s really insightful to see the correlations between these hashtags, what’s being spoken about and what’s being shared in those tweets. And Pulsar shows the impact this has made in an easy-to-visualise way with sentiment emoticons so we can just show a screenshot of the tweets and key topics all in one. It’s been invaluable to us.”

Pulsar has also been helpful for Sam’s wider academic purposes in researching Covid-19 trends. Whilst writing on multiple papers simultaneously, Sam is able to reference specific keyword filters and search strings in the appendices, “so anyone wanting to use Pulsar for similar research in the future can do reproducible studies.”



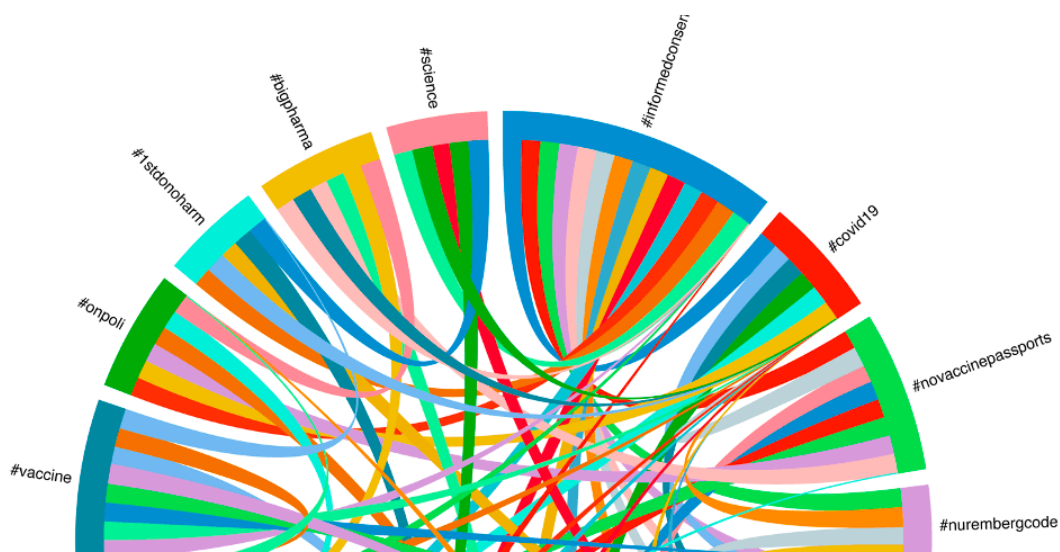
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Sam and her team are attending conferences and conducting workshops to get people thinking about how institutions can use social media monitoring tools like Pulsar to improve their comparative research.

When talking to different audiences, Sam rates “the ability Pulsar gives us to take away things we already know about and look into things that aren’t so obvious. The freedom to zoom in and out of the data is really helpful.”



## Results

Sam created a report of her Pulsar findings – “it’s a great way to visualise complexity at a glance.” The clarity of the visualisation Pulsar offers is of huge use in Sam’s academic setting.

She will routinely be showing data reports to Public Health England, the NHS and charities such as Unicef who may not be well versed in data science and need simple

conceptualisations. “Pulsar has been very helpful when trying to explain this to the laypeople that might not understand this,” she tells us.

Improved clarity to outsider stakeholders improves research organisations’ abilities to secure funding.

Pulsar has enabled Sam and the RREAL team to have real-world impact in helping public health organizations understand the Covid-19 pandemic. Though the anti-vax research findings are still ongoing, Sam recently finished one study that used Pulsar to look into how government policy on long Covid has been shared online and the public's reaction to it.

As well as giving a summary of online reactions to policy, Sam and her team were then able to give policy recommendations backed up by Pulsar data.

Using Pulsar's data, Sam has given recommendations to the NIHR and NHS England who were able to swiftly update their guidelines with specific advice, providing real-world solutions much faster than the months-long process of traditional healthcare research methods:

"Pulsar is giving us an insight we wouldn't have been able to do with any other tools. We're able to get data on all fronts to get those snapshots right."



Pulsar is the leading  
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## Get in touch

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