

Monkeypox At-a-glance from Google Trends and Reddit





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Purpose/Objective:

To what extent we can leverage web search queries (i.e., Google Trends) and social media (i.e., Reddit) in understanding the public's awareness and concerns of monkeypox in the U.S.

To explore how individuals' information seeking and sharing about monkeypox is associated with its geographical differences in community transmission.

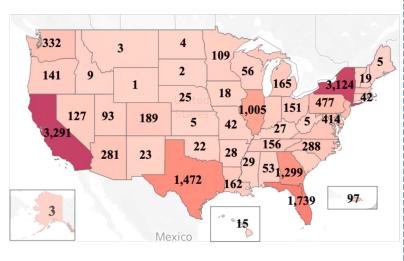


Figure 1. US monkeypox case for each state by August 26, 2022.

Research Questions:

RQ1: With each state as the unit, does the ranking of search interest/frequency match the ranking of confirmed cases?



RQ3: How much do individuals use Reddit to share their concerns and experiences about

monkeypox?

RQ2: What monkeypox-related topics were searched the most?

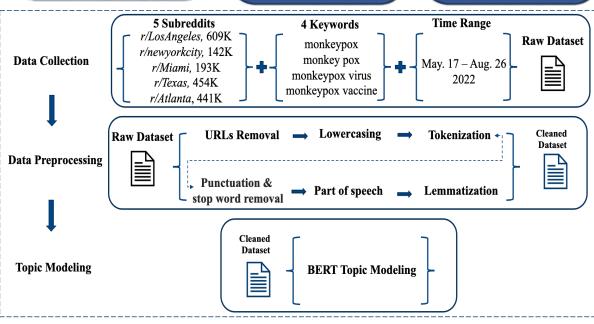


Figure 2. Methodology Workflow.

Results & Conclusions:

Table 1. Top 5 most-case states in the US by August 26, 2022, and Search Interests scores for top five most cases states. The value range of interest score is from 0 to 100 (0 = insufficient data; 50 = the term is moderately popular; 100 = the term is most popular).

		Search Interests scores			
State	Cases	monkeypox	monkey	monkeypox	monkeypox
			pox	virus	vaccine
CA	3,291	69	23	1	7
NY	3,124	67	24	1	8
FL	1,739	69	25	2	4
TX	1,472	71	23	2	4
GA	1,299	71	23	2	4

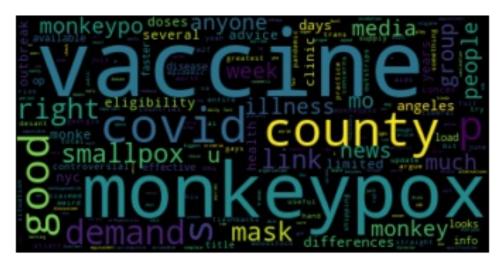


Figure 3: Word cloud for Reddit dataset.

The top three states with the **highest search interest scores** (75) for "monkeypox" is **TN**, **MI**, and **MD**. New York was ranked last with the same interest scores (67) as Nevada, Idaho, and Alaska.

The top 3 "monkeypox" related topics are: Monkeypox, Medical **sign**, and **Vaccine**. The top 3 "monkeypox" related queries are: "is monkeypox", "monkeypox symptoms", and "monkeypox vaccine".

A mismatch between searching frequency and the rank of locally confirmed cases. Individuals who reside in relatively higher-risk areas do not necessarily search for more information about monkeypox, and vice versa.