

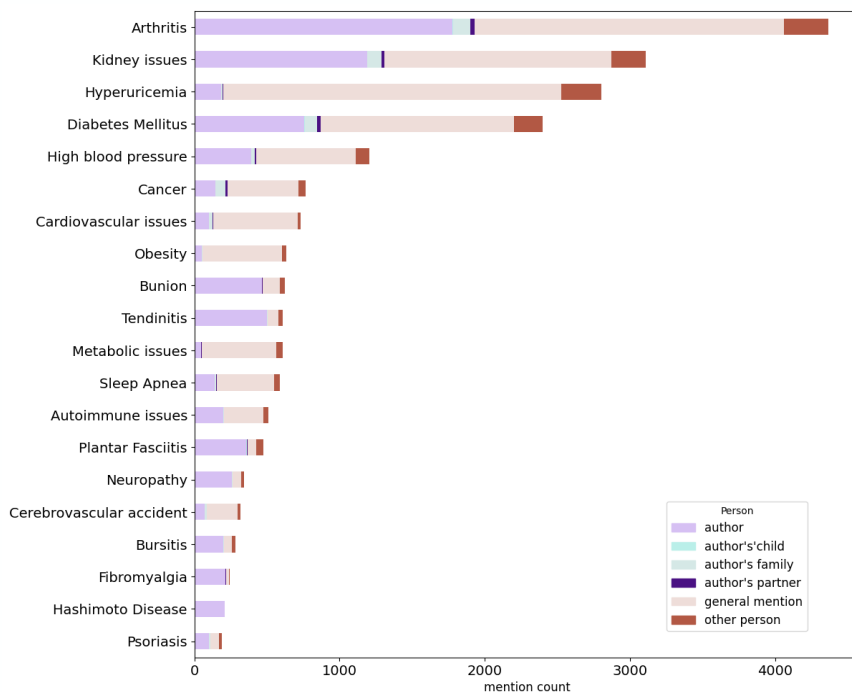
September 2024

Gout is a form of arthritis that occurs when too much uric acid builds up in the joints. Symptoms most commonly present in the large toe, but can be present in other joints, and include a sudden onset of severe pain, redness, and swelling. Gout attacks often happen at night, as the body’s temperature lowers, allowing uric acid to more quickly crystallize in the joints to cause the onset of an attack. With proper treatment, gout and its painful attacks can be successfully managed¹.

TREND is a community-powered digital analytics company that turns the conversations of rare and chronic disease communities into actionable insights that spark broader understanding and therapeutic progress. The aim of this research is to gain a deeper understanding of the comorbidities linked to gout. We have been partnering with the Gout Support Group of America (GSGA) for this important work.

FACEBOOK	DATA SOURCES	REDDIT
Group: Gout Support Group of America		Group: r/gout
Posts & Comments Analyzed: 114,016		Posts & Comments Analyzed: 217,967
Time Range: 2021-2024		Time Range: 2011-2024

Figure 1. Bar Chart of Condition Mentions by Relationship to Author



The stacked bar chart in Figure 1 illustrates the top 20 most frequently mentioned diseases or conditions in the dataset, with different colors indicating who is experiencing the condition.

- Arthritis, kidney issues, hyperuricemia, diabetes mellitus, and high blood pressure are the most frequently mentioned conditions overall.
- For most conditions, the majority of mentions are author related or general mentions, while hyperuricemia shows a notably large proportion of general mentions compared to the other conditions.
- Some conditions, like arthritis, kidney issues, diabetes mellitus, and cancer, have a higher proportion of mentions related to family members compared to other conditions.

Figure 2. Trends of Selected Gout Comorbidity Mentions Over Time

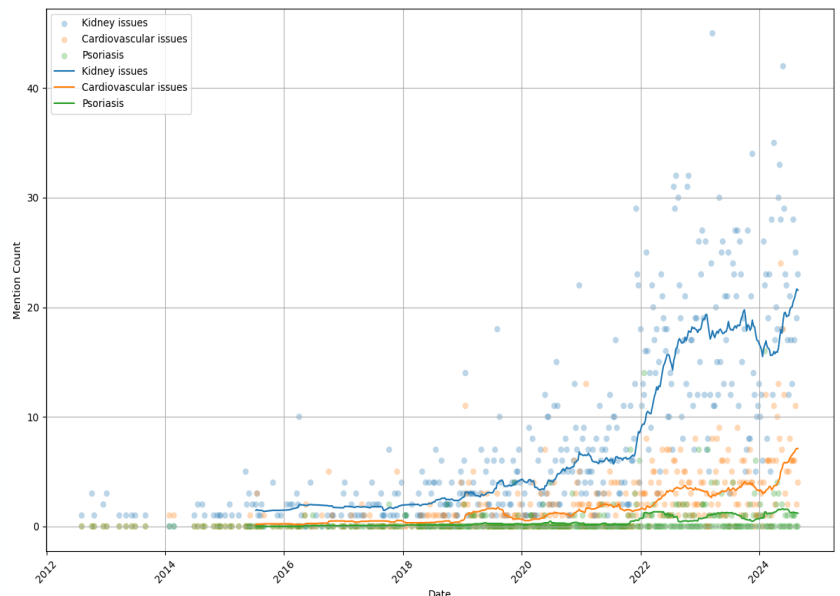


Figure 2 elucidates the trend of three selected comorbidities—Kidney Issues, Cardiovascular Issues, and Psoriasis—within the entire dataset. Each comorbidity exhibits a steady increase over time. There is a marked surge in mentions of kidney issues from 2022 onwards, suggesting an increasing concern or prevalence among the community members.

¹Gout Support Group of America website: <https://goutsupportgroup.org/about/>

Figure 3 shows strong associations between 'Kidney issues' and 'Cardiovascular issues', 'Diabetes Mellitus', and 'high blood pressure', with standard PMI2 above 2. There is weaker associations between 'Kidney issues' and 'body parts', 'uric acid', 'gout treatments' (allopurinol, febuxostat, colchicine), and 'side effects'.

Figure 4 demonstrates strong associations between 'Cardiovascular issues' and 'Diabetes Mellitus', 'high blood pressure', and 'Kidney issues' with standard PMI2 above 2, and weaker associations between 'Cardiovascular issues' and 'body parts' and 'allopurinol'.

Figure 3: Entities Related to Kidney issues

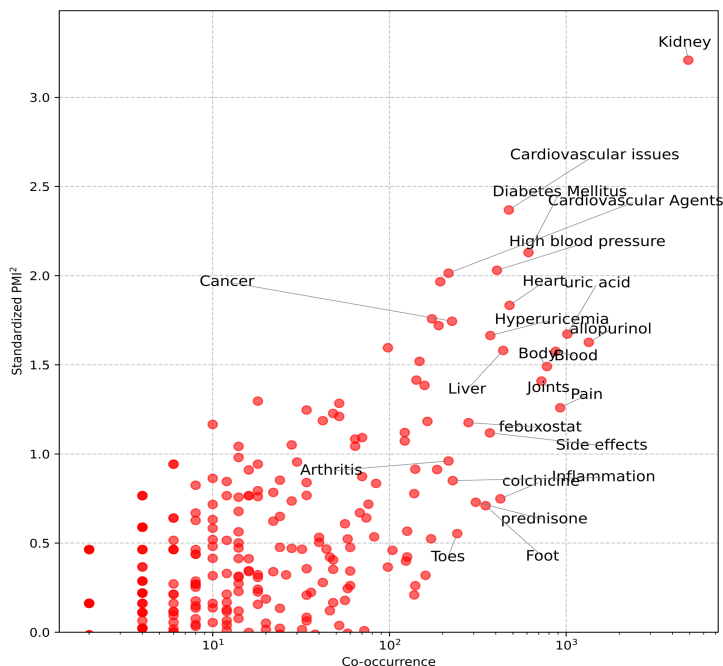


Figure 4: Entities Related to Cardiovascular Issues

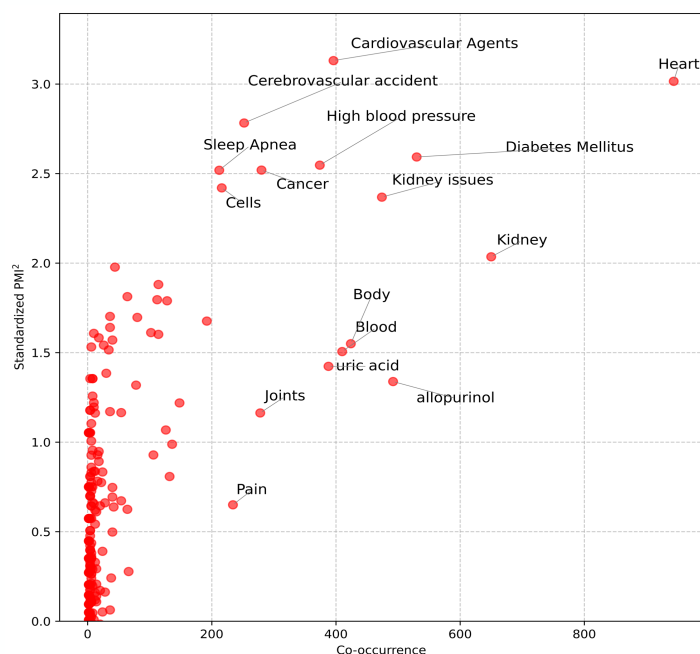


Figure 5: Distribution of Self-Reported Health Topics

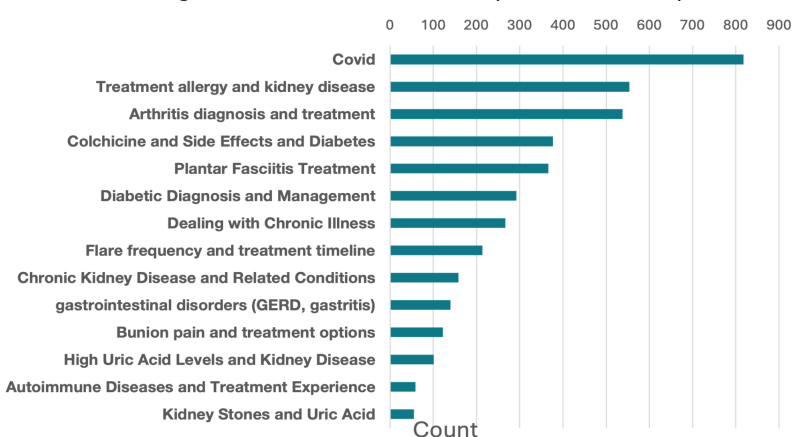


Figure 5 presents the results of a topic analysis conducted on paragraphs where gout patients confirmed having specific diseases or gout comorbidities.

The analysis reveals a diverse range of health concerns and experiences among gout patients. COVID-19 emerges as the most frequently discussed topic, likely reflecting the COVID's impact on this community.

Treatment-related issues, particularly concerning allergies and kidney disease, as well as arthritis diagnosis and treatment, are prominent themes. The high prevalence of discussions about colchicine side effects and diabetes underscores the complex medication regimens and comorbidities gout patients often manage.

CONCLUSION

The dataset reveals that arthritis, kidney issues, hyperuricemia, diabetes mellitus, and high blood pressure are the most frequently mentioned conditions among the online gout communities studied. Hyperuricemia stands out with a higher proportion of general mentions, while conditions like arthritis and kidney issues are more often discussed in relation to family members. These data show a significant increase in mentions of kidney issues from 2022 onwards, reflecting rising concerns. This analysis also highlights the impact of COVID-19 and the prominence of treatment-related issues, particularly for allergies, kidney disease, arthritis, and side effects from medications like colchicine. These findings indicate a complex health landscape that gout patients face while managing both comorbidities and medications. Given the increasing complexity of patients with gout, particularly with suspected kidney issues, this builds a strong case for specialty referral rather than management solely within primary care. A referral to specialists can provide the targeted expertise necessary to address the multifaceted challenges these patients encounter, leading to more comprehensive and effective care. This underscores the need for greater education and awareness in both primary care settings and the wider healthcare community.