What is the hype on #MedicinalMarijuana in the USA? A Twitter based analysis

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Introduction and Aims:
In recent years, medicinal cannabis (MC) has been the subject of heated debate about its potential therapeutic properties. In 2021, MC was legal across 33 U.S. states and D.C. This study analysed public opinion on MC by legal status from January to June 2021.

Design and Methods:
121,308 historical Tweets on MC were collated from Twitter. The topic (themes) of the Tweets were examined using topic modelling, a machine learning method that automatically identifies different topics present in Tweets. Tweets were categorised by Sentiment (positive, negative, neutral), by themes, and validated through manual coding performed on 1000 Tweets.

Results:
The most common themes of the Tweets presented in jurisdictions where MC is not legal were '*Current Legislation' (36%) and '*Support towards MC policy*' (29.1%). The themes in jurisdictions where MC is legal but not recreational cannabis (RC) were '*Promotion*' (25.3%) and '*Therapeutic effects of MC*' (14.3%). In jurisdictions where MC and RC are fully legal, themes were related to the '*Therapeutic effects of MC*' (27.7%), '*Current legislation in illegal states*' (16.8%), and '*Education*' (e.g., micro-dosing) (15.3%). Overall, positive sentiment dominated the discourse around MC. Topic modelling showed a substantial overlapping of topics between each jurisdiction. A web application was built to visualise the results (https://carmenlim.shinyapps.io/Medicinal_Cannabis/).

Discussions and Conclusions:
Overall, themes differ across jurisdictions with different legal status and sentiments were predominantly positive. Future studies should continue to monitor public conversation to inform public health and pave the way for better policy and regulations for medicinal cannabis.

Disclosure of Interest Statement: