

Examining Trends in the Public’s Awareness of Exocrine Pancreatic Insufficiency in The United States Using Infodemiology Metrics

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INTRODUCTION

Exocrine Pancreatic Insufficiency (EPI) is a disorder caused by multiple etiologies leading to decreased pancreatic function. EPI presents with nonspecific symptoms and is largely unknown by the public, making EPI a difficult diagnosis. Awareness campaigns for EPI have been supported by AbbVie, a pharmaceutical company that manufactures the only available treatment for EPI (Creon), but it is unknown whether the campaigns have led to increased EPI awareness.

OBJECTIVES

We sought to assess changes in EPI awareness over time evidenced by internet searches in the United States. Findings from this study may reveal how awareness campaigns, such as radio ads, have influenced the public’s awareness of EPI.

METHODS

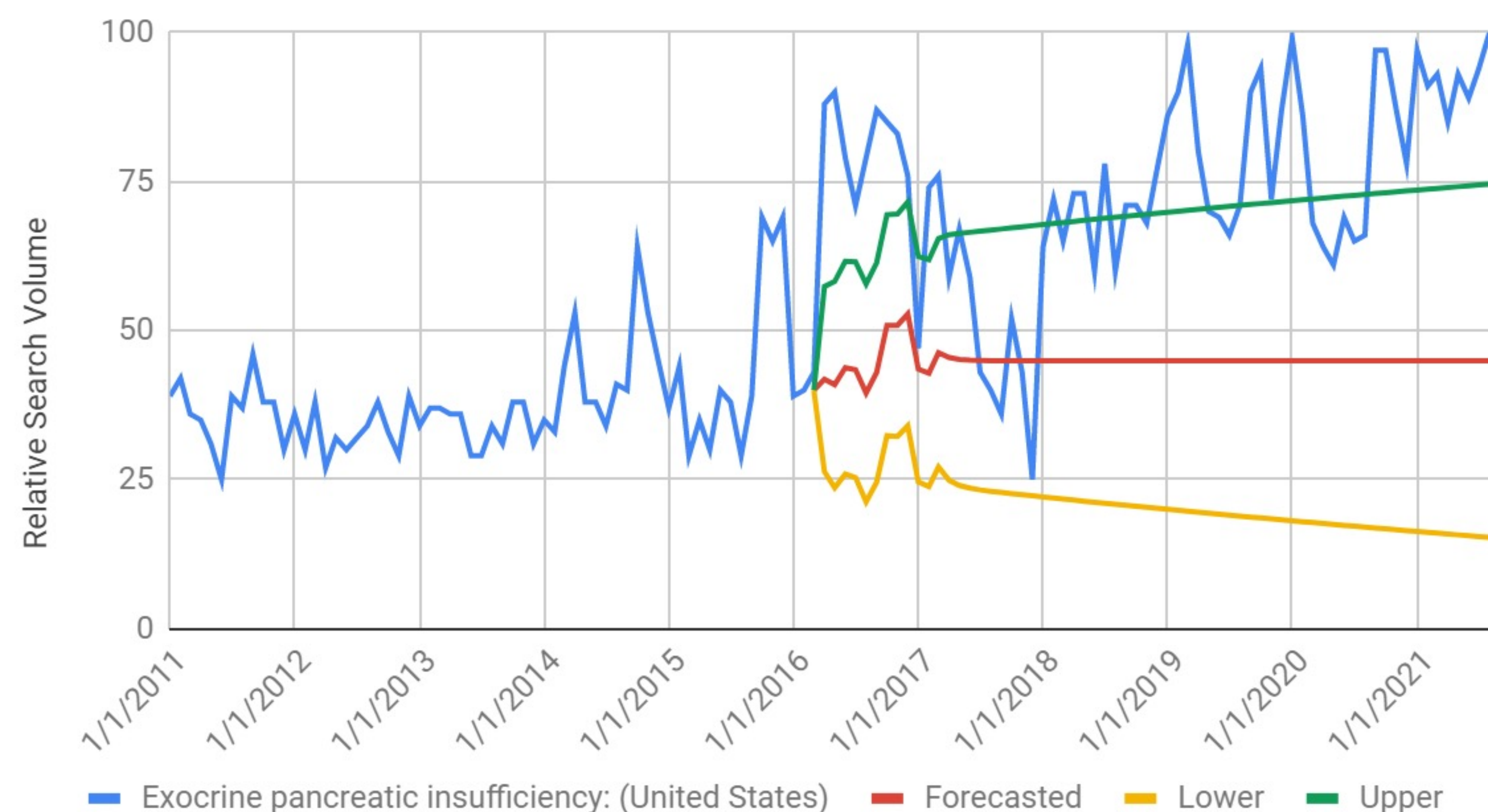
Google Trends is a popular and validated infodemiology tool.¹ Using Google Trends allows for real-time data analysis that reflects public awareness over time, which is reported as relative search volume (RSV). RSV represents a relative percent change in Google searches for selected terms over a given time period. We observed trends for the term “Exocrine Pancreatic Insufficiency” over the date range January 1, 2011 to October 1, 2021 to capture search trends before and after AbbVie’s advertisement campaigns. We used an ARIMA model to forecast expected search volumes based on search data before Abbvie’s campaign for Creon.

PRELIMINARY RESULTS

We found many statistically significant increases in RSV since the launch of AbbVie’s campaign, with peak RSV occurring in August and September of 2021, together representing a 122.5% increase compared to expected values ($P<.001$). Similar peaks were observed in March 2019 and January 2020, though every year since the launch had multiple statistically significant increases in RSV for “Exocrine Pancreatic Insufficiency.”

CHARTS AND FIGURES

Exocrine Pancreatic Insufficiency RSV vs Predicted Values



CONCLUSION

Results from our study suggest that the US public interest in EPI has increased steadily over the last 5 years compared to the 5 years prior, possibly reflecting the success of Abbvie advertisement campaigns. AbbVie has steadily increased advertisement spending since 2016, with reported net revenue for Creon following a similar trend. The success of AbbVie’s radio, TV, and internet advertisements may have served to educate patients on EPI, prompting them to search Google for more information or to find a physician who could evaluate them for EPI. Increasing awareness may support quicker and more accurate diagnosis of EPI.

REFERENCES

1. Mavragani A. Infodemiology and Infoveillance: Scoping Review. J Med Internet Res. 2020;22(4):e16206. doi:10.2196/16206

