*Background*

*It is a commonly held belief that external factors can influence patient demand in primary care. Clinicians often perceive significant variations in their workload related to factors such as weather and major sporting events. Past research has demonstrated correlations between these variables in emergency department admissions but is yet to demonstrate a similar relationship in primary care.*

*Aim*

*This study aims to assess whether factors including the weather, public holidays, major sporting events and health related news impact demand in primary care.*

*Method*

*Data was obtained retrospectively from a UK GP surgery over 12 months (September 2017-18). The surgery only assigns appointments on the day, allowing accurate interpretation of patient demand. Weather data was obtained from the Meteorological office and major health stories and sporting dates from* [*the*](http://BBC.com) *BBC website.*

*Results*

*Major sporting events resulted in significant declines in patient numbers (p<0.001). Mean ambient temperature and solar energy production demonstrated a linear relationship, negatively correlating with patient demand (p = 0.015, p = 0.029 respectively). Health articles relating to cancer lead to increased patient demand (p = 0.005). Degree of precipitation was not found to be a significant contributing factor.*

*Conclusion*

*This study elucidated significant variations in patient demand by a number of measurable factors. Precipitation, major health stories and post-public holidays all increased demand. Good weather, major sporting events and temperature all reduced patient numbers.*

*With further analysis of future data, projection models can be formulated to predict primary care demand.*

*Keywords: Primary health care, Weather, Projection models, Health media*