

# GoogleTrends as a patient therapeutic education resource on extracorporeal life support: What do patients want to know?

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## Abstract

**Introduction** Extracorporeal membrane oxygenation (ECMO) is implemented as a rescue therapy in COVID-19 related acute distress respiratory syndrome (ARDS) and refractory hypoxemia. Google trends (GT) is an ongoing-developing web-kit providing feedback on specific population's interests. This study uses GT to analyze the United States (US) general population interest in ECMO as COVID-19/ARDS salvage therapy. **Methods** GT was used to access data searched for the term *ECMO* and *COVID-19*. The gathered information included data from March 2020 through July 2021 within US territories. Search frequency, time intervals, sub-regions, frequent topics of interest, and related searches were analyzed. Data was reported as search frequency on means, and a value of 100 represented overall peak popularity. **Results** The number of Google searches related to the terms *ECMO* and *COVID-19* has surged and sustained interest over time ever since the initial reports of COVID-19 in the US, from an initial mean of 34% in March 2020 to a 100% interest by April 2020, resulting in an up-to-date overall average of 40% interest. Over time West Virginia, Gainesville, and Houston, lead the frequency of searches in sub-region, metro and city areas, respectively. Top search terms by frequency include: *ECMO machine*, *COVID ECMO*, *what is ECMO*, *ECMO treatment* and *VV ECMO*. Parallel to this, the related rising terms are: *COVID ECMO*, *ECMO machine COVID*, *ECMO for COVID*, *ECMO machine coronavirus*, and *ECMO vs ventilator*. Seemingly, medical-relevant websites fail to adequately address these for patient therapeutic education (PTE) purposes. **Conclusions** GT complements the understanding of interest in ECMO for COVID-19. When properly interpreted, the use of these trends can potentially improve on PTE and therapy awareness via specific medical relevant websites.

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