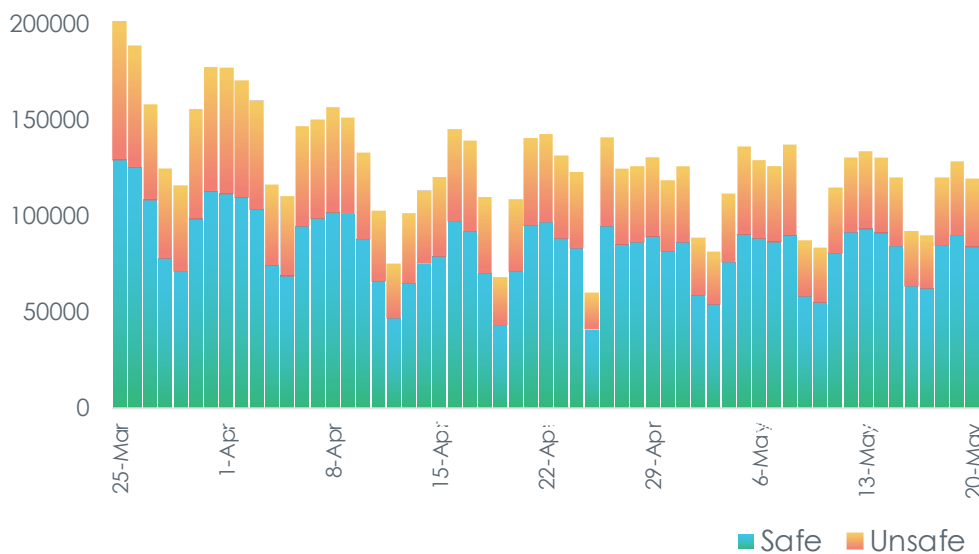


Across the GumGum publisher network over between March 25th-May 21st, GumGum's machine learning-based content analysis and brand safety engine, Verity, identified over **7 million unique pages that contain COVID-related keywords** ("covid", "covid19", "covid-19", "covid 19", "coronavirus", "corona virus", "pandemic", "quarantine"). Of those pages, **over 67% were classified as 'Safe'** by Verity's machine learning threat detection models.

The following data focus on web pages that include COVID-related keywords.

As such, all pages referenced in this data are being blocked by keyword-based brand safety systems aiming to protect advertisers from negative adjacencies.

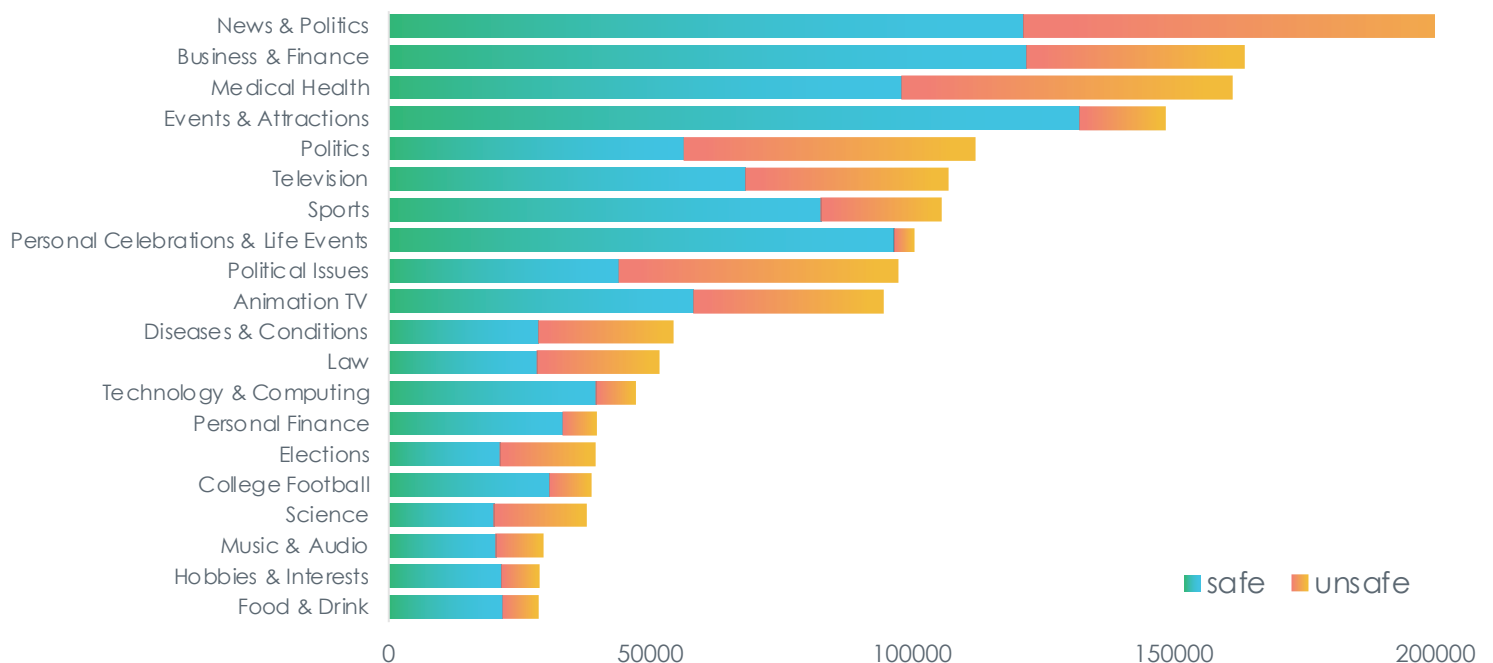
PAGES WITH COVID-19-RELATED KEYWORDS



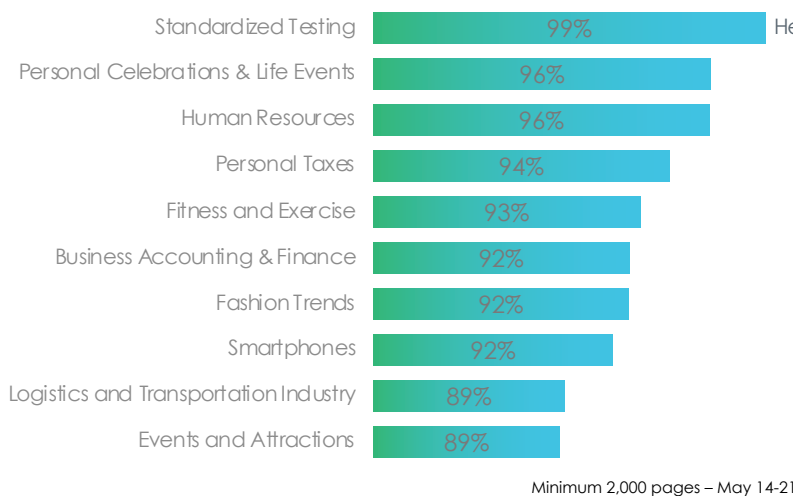
Over 67% of **daily unique pages** processed that contain one (or many) COVID-related keywords are Safe.

- 7.2M unique pages over the 2 month period
- Average of 84.2K safe unique pages per day
- Average of 42K unsafe unique pages per day

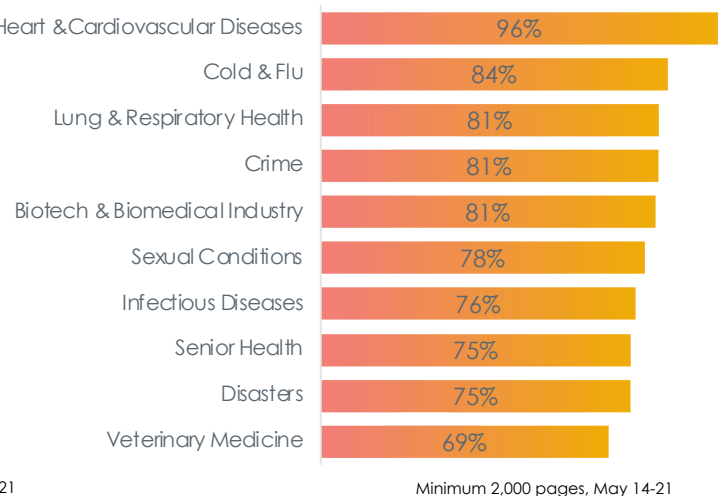
TOP 20 IAB CONTENT CATEGORIES, BY PAGE COUNT (May 14-21)



TOP 10 MOST SAFE IAB CONTENT CATEGORIES, BY 'SAFE' PERCENTAGE



TOP 10 LEAST SAFE IAB CONTENT CATEGORIES, BY 'UNSAFE' PERCENTAGE



VERITY'S VALUE

What this analysis reveals is that a significant volume of the pages that include coronavirus-related keywords are, in fact, safe for many brands to advertise on.

While most advertisers choose to block any page containing a COVID-related keyword, **Verity provides the opportunity to target safe, relevant pages related to content** like COVID-19.

Using Verity, an advertiser can **customize the safety threshold that best balances protection and reach**. Verity also allows for fine-tuning based on sentiment and safety thresholds across each of its 8 threat categories. While a cruise ship company's chosen safety threshold may deem 40% of pages containing a COVID-related keyword as 'Safe,' a hand sanitizer brand's chosen safety threshold may deem a greater share of pages 'Safe.' This approach allows advertisers to benefit from greater share-of-voice and brand awareness, as online traffic soars, while still ensuring brand safety and suitability.

To learn more about how Verity can help keep you safe while extending your reach, please visit gumgum.com/verity.

TRENDING CONTENT

COVID-19 is transforming consumer behavior, as people are confined to their homes for the foreseeable future. Since COVID-19 measures have been widely in effect, traffic has soared on pages related to dozens of IAB content categories.

- **Desktop Outpacing Mobile:** Traffic is up 36% on desktop versus 19% on mobile
- **Trending on Desktop:** Dozens of content categories are trending on desktop including exercise, health/lowfat cooking, wine, desserts & baking, nursing, humor, buying/selling homes, career advice, homeschooling, pets, video games, and style & fashion
- **COVID-19 Content Limited:** While COVID-19 is top-of-mind among consumers, only 5-10% of inventory is related to the coronavirus