

## PAIN AND DEEP BRAIN STIMULATION IN THE ERA OF OPTIMIZED SEARCH ENGINE MARKETING G. Matis, A. Chatzikalfas, G. Bara, V. Visser-Vandewalle, A. Koulousakis

## **Objectives:**

The term "search engine optimization" (SEO) encompasses the processes to obtain an optimal placement on search engine results pages (SERPs), leading to increased visibility of the desired term. Some of the techniques used for SEO incorporate keyword analysis, backlinking, and link building to improve link popularity.

The scope of this study is to assess the popularity of the term "Deep Brain Stimulation" (DBS) in the context of pain and emphasize the financial impact of this popularity in terms of web advertising.

## Methods:

The search analytics website "SpyFu" (www.spyfu.com) was used to calculate a wide variety of statistics such as search volume, cost per click (CPC), and advertising statistics per month for the term "DBS" based on keywords that american webpages are advertising on. Of note, SpyFu refreshes its data on a monthly basis.

## **Results:**

The keyword overview yielded:

- 6,600 American and 14,800 global searches
- a click-through rate (CTR) of 3%
- a ranking difficulty (RD) of 64



## UNIKLINIK KÖLN

- a CPC of \$0.28 (broad search with 43.5 daily clicks), \$0.46 (phrase search with 23.4 daily clicks) and \$1.58 (exact search with 1.56 daily clicks)
- a monthly cost of advertising of \$370
- 23 unique advertisers on these keywords
- the top 3 monthly budgets of the relevant advertisers were: \$32,419.20, \$103,493.62 and \$19,375,751.75
- the organic search ranking analysis provided 2.26 million results, a 95.9% domain diversity, a RD of 64, 6 government/educational domains, 41 keywords in Title, 20 keywords in URL, 783 monthly clicks, and Wikipedia and You Tube as the main social domains.
- profitable related keywords: "electrical stimulation brain", "electric brain stimulation" and "cranial electro stimulation device".

## **Conclusions:**

Search analytics websites are crucial components of a SEO campaign and are fully integrated in the current digital marketing trends. DBS health care providers could benefit from the advantages in this field in order to construct more efficient web-based information systems. Essential cornerstones of this modern approach should be the search of winning keywords, the spotting of the best backlink opportunities, the comparison of pages that rank on DBS and the organization of domains' keywords into targeted groups. In such a way, the dissemination of information along with the capitalization of economical profits represents a viable realistic goal.

# Neurosurgery

Department for Stereotactic and Functional Neurosurgery University Hospital of Cologne

### **Glossary**:

the total impressions the ad receives. title," and the number of .gov and .edu domains. clicks their own ad for this keyword. on this keyword in the last 3 months.

Monthly Searches (local): the average number of times each month that Google users search this exact keyword, broken into local (country) search volume.

Monthly Searches (global): the average number of times each month that Google users search this exact keyword, broken into global (world-wide) search volume. **Click-Through Rate:** Google's estimation of the number of clicks an ad gets vs.

Ranking Difficulty: how difficult it would be to rank on this keyword. The higher the number the more difficult it is to rank on, on a scale of 1-100. Ranking difficulty takes into account the strength of the domains, on-page signals like "keyword in

**Cost Per Click: the average amount advertisers pay Google anytime someone** 

**Daily Clicks: the number of clicks an ad may receive each day for this keyword.** Daily Cost and Monthly Cost: what Google estimates one would spend, on average, to advertise on this keyword each day/month.

Advertisers (in the last 3 months): how many unique advertisers have appeared

**Profitable Related Keywords:** by looking at strong competitors in this niche and their most trusted keywords over time, similar keywords are suggested.



WIP 2016 Dr. Georgios Matis