Popularity of Medicine and Laboratory Medicine journals: analysis of impact factor and popularity using Google Trends

Giuseppe Lippi

Section of Clinical Biochemistry, University of Verona, Verona, Italy

Correspondence to: Prof. Giuseppe Lippi. Section of Clinical Biochemistry, University of Verona, Piazzale LA Scuro, 37100, Verona, Italy. Email: giuseppe.lippi@univr.it; ulippi@tin.it.

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Google Trends (Google Inc. Mountain View, CA, United States) is a web instrument based on Google Search, which is aimed to provide the frequency of how a specific term is searched in the Google search engine. The final output is a digital report showing the frequency of search term compared to the overall number of Google searches. The numbers are generated according to an arbitrary scale (between 0 and 100), which mirrors the Web search interest in relation to the highest point on the graph. Therefore, a score of 100 defines the peak of popularity for a given search term, a score of 50 defines a search term with half popularity, whereas 0 means a search term has less than 1% popularity compared to the peak value. The use of this free Web instrument is gaining increasing interest for reflecting the popularity of a given medical search term, that can be a pathological condition (1), a therapeutic agent (2) and, likely, even a scientific journal.

In order to understand the general interest in scientific journals in the category "Medical Laboratory Technology", an electronic search was performed in Google Trends using the keywords "Clinical Chemistry" AND "Clinical Chemistry and Laboratory Medicine" AND "Clinica Chimica Acta" AND "Archives of Pathology and Laboratory Medicine" AND "Clinical Biochemistry", which are the top impact factor (IF) journals in this category, with an IF available since the 2006 and a search option as "journal" or "peer reviewed journal" also available in Google Trends. The search output between June 2005 and June 2015 was then displayed in an ordinal scale related to the peak of popularity (i.e., a maximum value of 100) during the whole search period. The IF of the journals was also retrieved from the *Journal of Citations Report* (JCR; Thomson Reuters, New York, NY, United States).

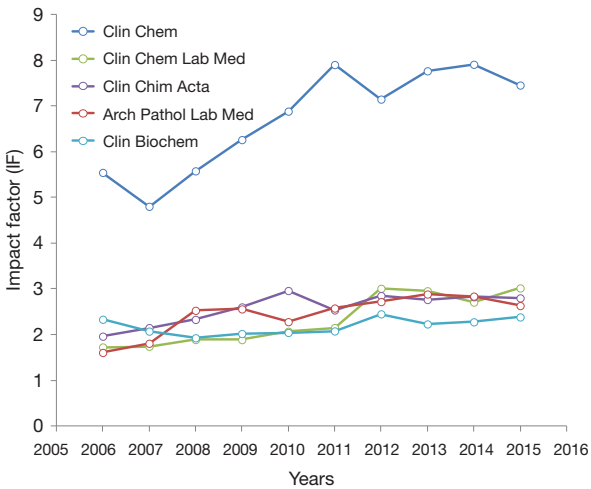

Figure 1 Impact factor of the five Laboratory Medicine journals between 2006–2015. *Clin Chem*, *Clinical Chemistry; Clin Chem Lab Med*, *Clinical Chemistry and Laboratory Medicine; Clin Chim Acta*, *Clinica Chimica Acta; Arch Pathol Lab Med*, *Archives of Pathology and Laboratory Medicine; Clin Biochem*, *Clinical Biochemistry*.

The main results of the Google Trends search are summarized in the following three figures, showing that despite the five Laboratory Medicine journals have steadily increased their IF (*Figure 1*), their volume of Google searches has consistently declined over time (*Figure 2*). This trend is not unique for Laboratory Medicine, since

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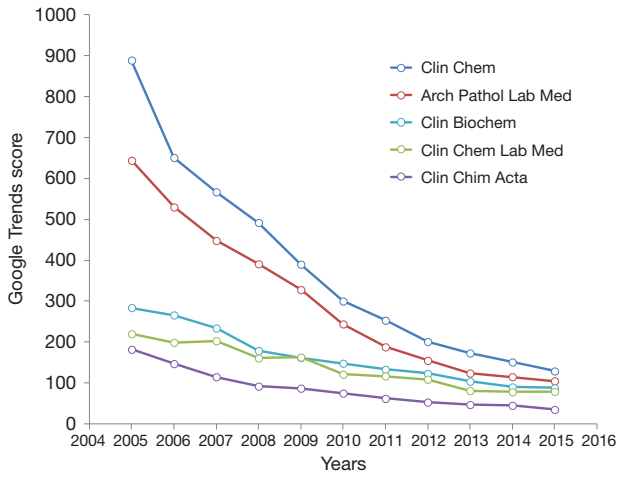

Figure 2 Volume of Google Trends (i.e., score) of the five Laboratory Medicine journals between 2005–2015. *Clin Chem*, *Clinical Chemistry; Arch Pathol Lab Med*, *Archives of Pathology and Laboratory Medicine; Clin Biochem*, *Clinical Biochemistry; Clin Chem Lab Med*, *Clinical Chemistry and Laboratory Medicine; Clin Chim Acta*, *Clinica Chimica Acta*.

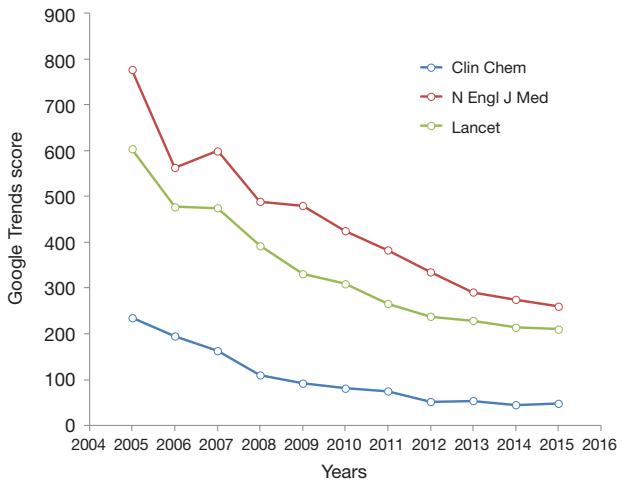

Figure 3 Volume of Google Trends (i.e., score) of the *Clinical Chemistry (Clin Chem)*, *New England Journal of Medicine (N Engl J Med)* and *Lancet*.

a rather similar phenomenon can be observed for the two top Medical journals, *New England Journal of Medicine and the Lancet* (*Figure 3*), thus meaning that the general search of official sources (i.e., scientific journals) of laboratory medicine and medical science in general is constantly declining over time. This is a rather worrying trend, since it is conceivable that both the general public and even a number of scientists may now be searching the Web for laboratory medicine issues and other medical information in non-peer-reviewed and hence potentially unreliable sources. This ultimately represents a serious threat for health care and society, since the access to non-validated sources of medical information can lead to gain untrustworthy information and may seriously jeopardize the efforts of many serious health professionals around the world.

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Footnote

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References

1. Nuti SV, Wayda B, Ranasinghe I, et al. The use of google

trends in health care research: a systematic review. PLoS One 2014;9:e109583.
2. Cervellin G, Comelli I, Lippi G. Is Google Trends a reliable tool for digital epidemiology? Insights from different clinical settings. J Epidemiol Global Health 2017. doi: 10.1016/j.jegh.2017.06.001.

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