Comparing topics of interest in forum discussions, Wiki and research articles in search of new indicators of the public’s interest in Diabetes

Fereshteh Didegah1*; Zahra Ghaseminik2; Juan Pablo Alperin1

1 Simon Fraser University, Scholarly Communications Lab, Vancouver BC, Canada
2 Scientometrics & Technological Investigation Research Group, ISC, Shiraz, Iran

* fdidegah@sfu.ca

Altmetrics17 Workshop - 26 Sep. 2017 – Toronto, Canada
Diabetes: Key facts

• Diabetes has grown in prevalence among adults aged 18 or older from 4.7% in 1980 to 8.5% in 2014.

• In 2012, 3.7 million people died for diabetes and high blood glucose (WHO, 2017).
Our motivation
We aim to:

- Uncover the areas of interest and needs of the general public related to diabetes, as seen in online platforms, and their relationship to the research on those topics.
- The extent to which discussions on public online platforms align with academic research in diabetes
- The lag/lead between the topics discussed in online platforms and topics researched by scholars.
Data

• *DiabeticConnect* forum discussions
  22,845 discussions and their tags from 2008-2016

• Wikipedia articles
  418 articles and their edits (200 articles were removed since they were about celebrities who died for/suffered from diabetes) (2008-2016)

• Scopus articles
  108,180 articles (2008-2016)
Methods

• **Labeled Latent Dirichlet Allocation (LLDA):** The tags on the forum were used as the initial labels because we are interested in public language use. Then we used the model developed with the forum as a training set to classify Wiki and Scopus articles.

• **Time series** (Original – Normalized – Shifted)

• 20 highly discussed topics on the forum are compared across the three platforms.
TOPIC: Neuropathy

Original

Normalized

(Lag 0 Years)
TOPIC: A1C Test
TOPIC: A1C Test
Forum is lagging research and Wiki 1 year
TOPIC: Emotional support/Motivation

It is highly discussed on the Forum.
TOPIC: Insulin
It shows an increasing trend on the Forum.
TOPIC: Diabetes Diet
It is not well researched in Scopus while highly discussed on online platforms.
Conclusion

• Not all the highly discussed topics on the forum are of interest to researchers and Wiki authors, and vice versa.

• While a high percentage of articles in Scopus are about diabetes testing (especially a1c test), control or treatments, a large number of forum posts discussed emotional support and motivation for patients and diabetes diet and nutrition.

• New sources like public discussion forums can lead to a greater understanding of the connection between researcher’s topic of interest and the public’s interest.
Thanks for Your Attention!

Fereshteh Didegah¹ &*; Zahra Ghasemini²; Juan Pablo Alperin¹

¹Simon Fraser University, Scholarly Communications Lab, Vancouver BC, Canada
²Scientometrics & Technological Investigation Research Group, ISC, Shiraz, Iran

* fdidegah@sfu.ca