

Informal education of medical doctors on the Internet

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Abstract. Physicians achieve parts of their knowledge informally on the Internet. In a first study we analyzed the quality of online content of prenatal screening and diagnosis on elements like Wikipedia, Twitter or YouTube. Furthermore, own content was published on blogs, forums and static pages, and visitor's data was measured. The second study consists of three surveys among physicians: Doctors use public pages like blogs or Wikipedia rather than professional or scientific communities and talk about patients via mailing lists or direct messages.

Keywords. social media, internet, e-learning, education

Introduction

The growing knowledge on medical treatments requires new ways to educate the doctors continuously ([1]). More important than formal education on universities or in special courses is informal learning (70% according to [2],[3]). Medical professionals prefer the exchange among colleagues or use the Internet that contributes a high amount to professional knowledge ([4], [5]). So we researched the use of social media elements like Twitter, Facebook, blogs, video portals and forums for information on diagnostics within the first trimester of pregnancy on the German community.

The objective of this paper is to examine the supply of medical expertise on the Internet. A systematic analysis of different elements explains how to help physicians to search successfully on the Internet.

1. Methods

In the first part of this study medical content was published on Twitter, an own static page, forum and blog in 2010. Our doctors wrote 15 blog articles. Existing content on YouTube and in professional communities was analyzed. Their effect was evaluated by specific

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tracking tools ([6],[7]). Authors and visitors of the German Wikipedia pages about prenatal screening and diagnosis were also investigated.

In the second part of study we asked 107 gynecologists, treating pregnant women, about their behavior on the Internet. 35 answered the survey completely. For comparison, groups of 13 medical students and 400 general practitioners (14 answered) were interviewed.

2. Results

The German Wikipedia pages about prenatal screening and diagnosis had between 320 visitors per month (Serothorax) and 15300 visitors (Spina bifida) in September 2010. The content was written by medical professionals (34%), anonymous logins (40%, probably doctors) and people of unknown profession like admins (26%). The most popular video on YouTube was “Fetal Medicine Foundation - Nuchal translucency” with 95 views in the investigated month, mainly from the USA. In the professional commercial communities we could not find any discussion about the explored thematic complex. On Facebook this finding was even valid for English speaking groups.

Our forum had 90 page impressions and our blog 784 in September 2010. Most of the users came via Google and did not read more pages. The used search words were very specific for the described diagnosis. The accesses on the RSS feed were too low to measure. The links in our Twitter updates were clicked 5-10 times per month.

How medical doctors gain their knowledge

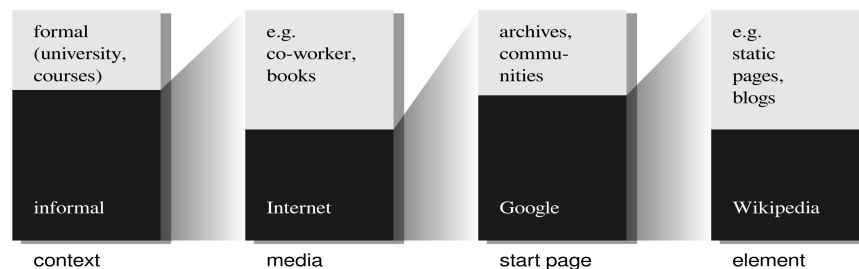


Figure 1. Importance of public web pages for doctors' knowledge

According to the survey among gynecologists, 80% (n=35) of medical doctors use Google when searching for professional information. 74% visit Wikipedia, 14% are in professional communities and 3% on Twitter. The results of the other two surveys were similar. According to all three surveys around 70% of the physicians do not use any other social network than that they were asked in.

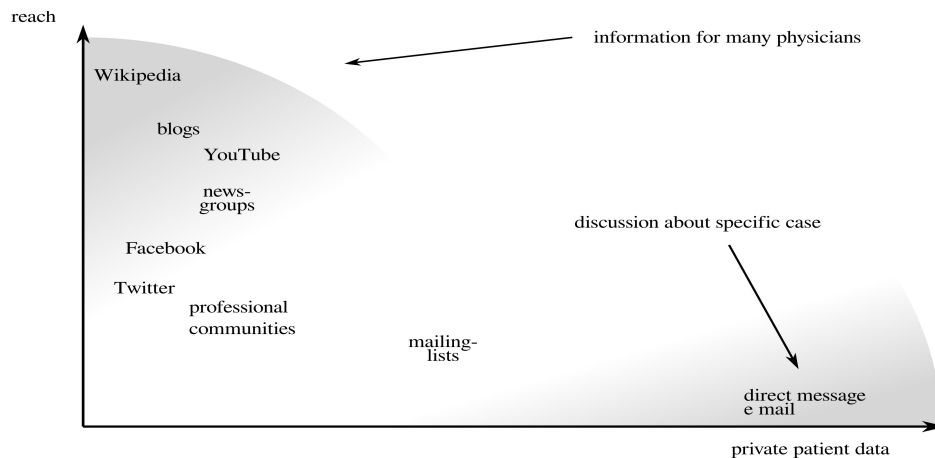


Figure 2. Amount of patient data and overall reach for different elements

3. Discussion

Activities on Wikipedia are dominating. 34% of the contributors to the monitored articles declared to be physicians. The actual number is considerably higher. This constitutes the high quality of medical-related articles. 74% of the interviewed doctors would read these pages. Blog posts were very popular among doctors. 80% of the doctors confirmed to use Google for achieving their knowledge. Our statistics underline this behavior. Our pages were accessed using Google with highly specific search words. All three surveys concluded that doctors do not use commercial communities like Facebook or specialized medical communities very often (<30%).

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