

## **Finding a Cure for Crohn's Disease - Analyzing Medical Conditions in Online Communities**

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We introduce a project trying to automatically collect information from patients of a chronic disease by analyzing online social networks. More specifically, we look at online postings of patients with Crohn's Disease and Ulcerative Colitis by analyzing their Facebook friendship and discussion networks as well as Twitter and other online forum posts.

We identified Facebook groups whose goal is to improve the lives of Crohn's patients, or even to find a cure. This information provides valuable input to the creation process of creating a community of Crohn's patients. The friendship network of the Facebook groups is surprisingly unconnected, even considering that we are only able to collect the links of people who have made their friends public. There are only little star networks with very short average path length of three to four. When we manually checked a few of them, the person in the center was usually somebody affected with Crohn's disease, and the people in the periphery were their friends. This does not mean that the people in the center don't have bridge links through friend-of-friend connections. Rather, this means that the fans of the Crohn's support pages don't know each other. Additionally we also did a content analysis of Facebook and Twitter, which illustrates very different medical approaches in different regions, with emphasis on specific drugs like Prednisone in the US, on diets and other drugs like Humira in the UK, and Remicade and surgery in Canada.