

Tapping into the social network

Can social media be harnessed for the good of public health? Rajiv Rimal spoke to Ben Jones about its benefits, challenges and what lies ahead.

Q: How useful a tool is social media when it comes to public health?

A: It depends! But on the whole, the best way to characterize the role of social media is that it has tremendous potential in ways that bring people together, in ways that provide real time assistance in times of need, and in bridging geographical and time-bound differences between people. In that regard, it has tremendous potential and we're already seeing evidence of the positive ways in which social media can be used in improving health and the state of humanity. But it comes with costs and potential pitfalls.

Q: By implication, the word 'potential' means that social media has not quite been harnessed for public health yet. Why is this?

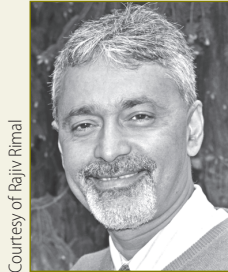
A: For several reasons. One is, if we look at the effects of social media from a more detached objective, a more rigorous kind of perspective, data are not really there. Some data show how social media has been used. We know, for example, that in Egypt, social media was instrumental in bringing democracy. We know that after the earthquake in Haiti, social media was used to locate people.

So we have anecdotal evidence from different places that shows how social media can be used and has been used, but it's also easy to get swept away in the euphoria of these kinds of events. In terms of day-to-day use of social media, we're not quite there in terms of rigorous scientific evidence of its effectiveness in public health.

This is the difference between process and outcome. There is a lot of data pointing to process – does that lead to wonderful outcomes? Time will tell. I think it will, but we need to wait to see the effects of that.

Q: What do you mean by 'process' and 'outcome' in this context?

A: What I mean by process is the set of activities that go towards producing something. We know quite a bit, for example, about how people use social media, how many hospitals use social media, etc. But outcomes are the effects of using social media.



Courtesy of Rajiv Rimal

Rajiv Rimal

Rajiv N Rimal is an associate professor in the department of Health, Behavior and Society at the Johns Hopkins University Bloomberg School of Public Health. His work seeks to understand how individuals, across a variety of countries and cultures, process risk information, and how societal norms affect human behaviour. His current work focuses on developing, implementing, and evaluating HIV prevention interventions through the use of mass media, mobilization of community resources, and promotion of interpersonal communication in sub-

Saharan Africa. His recent work has investigated how stigma toward people living with HIV can be reduced through the media, how young girls in Africa can be empowered for educational aspiration, and how communication theory can be used for effective HIV prevention. He is currently working in Ethiopia, India, Malawi, Nepal and the United States of America.

In terms of what it has produced, Egypt is an example where you could say that it produced democracy. But that's an exception. There's a lot of process-level data that says hospitals are using social media to bring patients together, to put patients in touch with their physicians and so forth. That's what I mean by process, but does that lead to a positive outcome – for example, cost savings? Does it lead to faster, more efficient and better care? I don't know. The jury's still out.

“ I deal with people [in sub-Saharan Africa] who've never been online in their lives. [...] There is a danger they could be left behind. ”

What are the different ways of looking at the effects of social media in a more formal way? One way to do that would be to look at whom it affects and in what way: you can think of a continuum that goes from consumers, at one end, all the way up to the regulators, at the other end.

For the consumer, it provides information. They can seek informa-

tion on treatment. People who've been diagnosed with a particular disease can seek comfort, and they can go to chat boards to see who is saying what about a particular disease. People also publicize what has or has not worked for them and they can inform others about things that have produced ill-effects. They can also find support groups and so forth.

With hospitals, there was one study in May 2010 in the *Annals of Internal Medicine*, by Thaker et al. that showed that 20% of hospitals in the USA have a social media presence. That's Facebook, Twitter, links to Youtube, Flickr, blogs; all these different ways.

From a health systems level, one area where social media has a tremendous impact is in natural disasters and emergency preparedness. I talked about the Haiti example in 2010. One study in the *New England Journal of Medicine* found that, during the H1N1 pandemic in 2009, the Virginia (USA) Health Department tweeted where vaccine was available, so people flocked to those sites. So that's an example of an effect which has happened in real time.

Q: How do you define social media?

A: I like to think of social media, in comparison with our conventional media. This is mostly in terms of many-to-many versus one-to-many. One-to-many is where you have one television station that is broadcasting to many.

What makes social media so powerful is that it is really many-to-many.

With social media, users have a way of modifying content in real time. In the old days, you would have to write a letter to the broadcaster. Now you can get user input in real time.

Q: How do drug companies and manufacturers use social media?

A: According to a study in the *Journal of Medical Internet Research* in July 2011, 40% of the top 10 pharmaceutical companies have heavy presence in social media. They can use that for authenticity, and they can use that to enhance their own credibility. So, having presence on these sites allows them to use very fine-grained targeting to go after particular patients.

In other countries where direct-to-consumer marketing is heavily regulated, there are lots of concerns that companies are using social media to circumvent these regulations with almost no oversight. So that's a real concern. There's a lot of work that needs to be done in this area because of the presence of social media.

Q: Is there a danger that social media can erode credibility?

A: Absolutely. However, most innovations have positive and negative sides to them, and social media is no exception. A primary concern with social media is the sheer volume of information that is generated with little or no oversight.

Q: What are the issues around using social media for public health purposes?

A: In the USA, we are quite behind. The disparity in access to high-speed internet is still a sore point in the USA and an issue in many countries.

Furthermore, one of the features of new technologies is that they shift the onus from the producers and manufacturers to the consumers. What I mean is that, often, we have to opt out of systems and processes of which, by default, we

are a part. For example, by default, most of our movement on the internet is known to our internet service providers and other companies that benefit from this information. If we do not want to be tracked, we have to opt out. The burden is on us to do so.

It's very hard to tell where social media is going but it's really exciting, especially in two aspects about this technology. One is that it's scalable – it can be increased in scope and capacity exponentially. The second is that it can be user-controlled. Any technology that allows people's creativity to come out is tremendously exciting.

Q: What knock-on effect does that have for public health?

In the relatively shorter term, people who are less able to adapt to this changing environment are going to be increasingly vulnerable. That is a really big concern especially for people who are minorities in their larger communities.

We've seen the harmful effect of that kind of negligence during public health emergencies. So, from a public health systems' perspective, that is certainly a concern.

Q: What does social media tell us about public health and human behaviour?

A: There is no doubt that a certain segment of the population has benefited tremendously from having information at its fingertips: the segment that is edu-

cated and online. That used to be an elite group, but it's much larger now.

I do a lot of work in sub-Saharan Africa, and I deal with people who have never been online in their lives. That's a big chunk of the population in many countries. There is a danger they could be left behind, and the responsibility is on the larger public health community to provide access for the people who don't have access.

Having said that, for those people with access, social media has forced doctors to act on the same level as their patients, not to use a top-down approach. In that way, the effect is very positive.

Q: What does the future hold for social media and public health?

A: What makes this so interesting is that we really don't know. Who would have guessed we would be having fun and interacting the way we are now? It's very hard to tell where this is going but it's really exciting, especially in two aspects about this technology. One is that it's scalable – it can be increased in scope and capacity exponentially. The second is that it can be user-controlled. Any technology that allows people's creativity to come out is tremendously exciting. But it's up to us to harness it in ways that are productive.

It is inevitable that everybody will be connected via electronic media and here's why: even in very resource-poor countries, there is now a movement to do things online. Even things like dealing with local and central government, where you had to use a pencil and paper, have changed and that is no longer an option.

What that means is that people are forced to get online. In the next 10 years, my guess is that there would be very few pockets of people in the world for whom not being online is an option. ■