eHorizon for eHealth

The growing need to accelerate decision-making to identify and ensure that beneficial technologies are made available as quickly as possible must be reconciled with the expectations to protect patients and consumers from unsafe and ineffective technologies. Horizon scanning—the systematic search for incipient trends, opportunities and constraints that may affect the probability of achieving management goals and objectives—has the potential to contribute to the assessment of new and emerging health and healthcare technologies prior to their launch onto the market.

Marco A. Palomino  Emma Bland  Tim Taylor  Richard Owen  Lora Fleming  Michael H. Depledge

Methodology

We have developed a horizon scanning prototype system that automates the task of seeking new and emerging technologies. We are interested in information associated with eHealth and telemedicine to identify new developments which are likely to impact the provision of health services and to draw attention to opportunities for future research.

Open Search

Although we give special consideration to the scanning of news websites, our search is open to the entire Web, including industrial press releases, technology websites, bibliographic databases, and conference proceedings that are available online. Our prototype organises the information that it collects, and displays it in a format that can be browsed using any Web-browser.

Emerging Issues

Some of the emerging issues identified through our horizon scanning prototype system thus far are listed below...

Social Networks

Social networks are very powerful for tracking and predicting the spread of disease: the more friends a person has in Facebook, the earlier in the flu season the person gets influenza [2].

By analysing aggregated search data to estimate the occurrences of influenza—this means data based on search terms that Google has identified as indicators of influenza activity—, Google Flu Trends [3] has been able to predict by up to several weeks where influenza outbreaks are most likely to occur on a geographical basis.

Location

A great deal of work using mobile phones for health care is happening in Canada and India. Norway created Europe’s first Research and Development Centre for Telemedicine, and a Danish company—Daintel—won the 2012 EU Small and Medium Enterprises eHealth Competition’s first prize.

Artificial Intelligence (AI)

By combining AI with cloud technologies, any online device can have access to medical AI. This has the potential to remove intermediation—an AI application can look at the rash on a patient’s skin and determine what it is. Soon every primary care doctor will have an app on their phone to send photos to the cloud.

References

