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The rapid global reach in telecommunications has permited public health professionals to communicate more effectively. In particular, internet-based resources such as discussion sites and online news sources, accessible through free and unrestricted subscription, are valuable sources of information. These data also exemplify unprecedented potential for increasing public awareness on public health issues and early warning of disease prior to their widespread recognition. However, despite an abundance of disparate electronic resources, none is comprehensive. Each has geographic, population and expertise gaps. There is lack of integration between tools and information sources and the output of these systems often comes as unstructured free text. Today, I will discuss the current capabilities and future directions in the use of the non-traditional data sources for the purposes of public health surveillance. I will specifically discuss the application of Web 2.0 and mobile phones as new approaches to rapid detection of emerging infectious diseases. In particular, I will describe a system, Healthmap.org, a free and open resource that attempts to address these issue by enhancing surveillance of infectious diseases through integration. Drawing from recent examples such as the H1N1 pandemic and the Haiti earthquake, I will demonstrate how new surveillance technology is providing early warning and tracking of new and emerging public health threats.