Abstract

Background:
Risk factor surveillance is a continuous data collection, analysis, and dissemination activity. Information technology plays an important role in building the surveillance system and a big data approach has become a hot topic. Big data analytics are the advanced methods to derive insight and knowledge from the big data of high volume, speed, and variety, such as text mining, natural language processing, and artificial intelligence. They can handle a large amount of untraditional and unstructured data and thus provide innovative ways for conducting the risk factor surveillance.

Purpose:
The purpose of this study is to explore the possible application of current big data analytics in the risk factor surveillance.

Study/Intervention Design:
Literature review

Methods:
This study examined the definition, feature, and present use of current big data analytics and then linked them with the risk factor surveillance.

Results:
Current big data analytics were analyzed including: text analytics (sentiment analysis and social data analytics are part of it), web analytics, sensor analytics, geospatial analytics, video analytics, and audio analytics. The text analytics analyze free text data, so it allows efficiently collecting and analyzing information from the internet. Web analytics provide a way to look at web surfing behaviors. Geospatial analytics facilitate location analysis. Sensor analytics make it possible to use self-tracking devices and environment monitors in surveys. Video analytics and audio analytics may allow us to use new methods to conduct surveys.

Conclusion:
Big data analytics can be applied to the risk factor surveillance. They provide new data sources and innovative ways to conduct surveys.

Conflict of Interest:
The authors declare no conflict of interest at all.

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