# Accepted Manuscript


Big data in forensic science and medicine

Thomas Lefèvre

PII: S1752-928X(17)30115-4

DOI: 10.1016/j.jflm.2017.08.001

Reference: YJFLM 1536

To appear in: *Journal of Forensic and Legal Medicine*

Received Date: 1752-928X 1752-928X

Revised Date: 1752-928X 1752-928X

Accepted Date: 1752-928X 1752-928X

Please cite this article as: Lefèvre T, Big data in forensic science and medicine, *Journal of Forensic and Legal Medicine* (2017), doi: 10.1016/j.jflm.2017.08.001.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

**Big data in forensic science and medicine**

Author: Thomas Lefèvre[1,2]

[1]Hôpital Jean-Verdier (AP-HP), Department of Forensic Science and Medicine, F-93140 Bondy, France

[2]IRIS - Institut de recherches interdisciplinaires sur les enjeux sociaux (UMR 8156-723), Bobigny, France

Email addresses: thomas.lefevre@univ-paris13.fr

Corresponding author: Thomas Lefèvre

Phone number: 33148026325

Fax number: 33148026557

Word count: 3792

Abstract

In less than a decade, big data in medicine has become quite a phenomenon and many biomedical disciplines got their own tribune on the topic. Perspectives and debates are flourishing while there is a lack for a consensual definition for big data. The 3Vs paradigm is frequently evoked to define the big data principles and stands for Volume, Variety and Velocity. Even according to this paradigm, genuine big data studies are still scarce in medicine and may not meet all expectations. On one hand, techniques usually presented as specific to the big data such as machine learning techniques are supposed to support the ambition of personalized, predictive and preventive medicines. These techniques are mostly far from been new and are more than 50 years old for the most ancient. On the other hand, several issues closely related to the properties of big data and inherited from other scientific fields such as artificial intelligence are often underestimated if not ignored. Besides, a few papers temper the almost unanimous big data enthusiasm and are worth attention since they delineate what is at stakes. In this context, forensic science is still awaiting for its position papers as well as for a comprehensive outline of what kind of contribution big data could bring to the field. The present situation calls for definitions and actions to rationally guide research and practice in big data. It is an opportunity for grounding a true interdisciplinary approach in forensic science and medicine that is mainly based on evidence.

Key words: forensic science; big data; personalized medicine; predictive medicine; machine learning; dimensionality

Download English Version:

https://daneshyari.com/en/article/6554939

Download Persian Version:

https://daneshyari.com/article/6554939

Daneshyari.com