

# Open Data in Health and Clinical Care

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The Volume 12, issue 2, 2016 of the European Journal of Biomedical Informatics deals with the special topic **Open Data in Health and Clinical Care** and other two topics of biomedical informatics. The gap between the demand for healthcare from an increasingly well-informed citizens and the ability of the government and healthcare organizations to meet this demand is widening all the time. In a complex environment such as the one related to health, which includes public and private sectors, services to the citizens as well as research, and addresses many different actors at many different levels, the issue of Open Data opens new challenging perspectives, but, at the same time, poses questions and problems which require to be adequately faced by the International community. From one side, new National and International regulations, are going towards the policy of making public the data collected for research purposes. On the other side, the great advances and progresses in ICT as well as the availability of wearable technologies, which allow the remote and continuous monitoring of people in different circumstances and situations, are able to generate large amounts of data. Further, clinical and administrative data collected in the public health systems, cover also different aspects related, for example, to administrative information, quality of the services, etc. All these are, with no doubt, precious sources of information available for creating further research or for improving public services or even for different purposes. The so called "data re-use" obviously relates to different aspects which include not only interoperability, privacy and security, but also strategies for preventing from misinterpretation of the actual meaning of the original data.

Thus, Bonacina, in his paper titled **Linked Open Data in Health and Clinical Care: A Review of the Literature**, goes beyond the mere concept of shared data, and also associates other fundamental resources: shared ontologies, knowledge bases, and datasets, just for mentioning a few, and presents the paradigm of Linked Open Data with the perspective of increasing the potentiality of the research community.

A completely different scenario is presented in the paper **Open Data in the Health Context: The Lombardy Region Experience**, by Barone and coauthors. Here the point of view of a Government institution for public health is faced. The need of fulfilling National and EU regulations, and the examples from other Countries with stronger traditions in

this field, pushed towards the creation of services addressed to the citizens, in order to provide them the tools for a personal and more informed use of the public resources. On the other hand the authors are also well aware of the importance of making these data available for research and foresee new future uses.

The paper **Gregor Mendel's Genetic Experiments: A Statistical Analysis After 150 Years** by Kalina proposes new two-stage statistical models, which are in a better accordance with Mendel's data than a classical model, where the latter considers a fixed sample size. If Mendel realized his experiments following such two-stage algorithm, which cannot be however proven, the results would purify Mendel's legacy and remove the suspicions that he modified the results. Mendel's experiments are described from a statistical point of view and his data are shown to be close to randomly generated data from the novel models. The paper also discusses Mendel's legacy from the point of view of biostatistics.

The last paper **Students' Behavior Related to Oral Health** by Markovic evaluates the oral health behavior of dental students of the Medical Faculty in Podgorica and the Faculty of Political Science in Podgorica. The survey instrument was a questionnaire of closed type, containing questions about oral hygiene, visits to the dentist, as well as questions about nutrition and consumption of tobacco. The study showed that students take care of their oral health, but there is a need for continuous education programs on the importance and protection of oral health.

In the present issue the subject of **Open Data in Health and Clinical Care** is only partially explored. On the other hand, it is remarkable that the contributors have quite different affiliations: the former is from a Sweden Clinical Institute, the latter involves a substantially public Italian company, owned by the Government health care institutions. Thus the interest is really widespread. There are many other technical, legal, governance and use aspects which deserves to be deeply investigated, also taking into account the points of view of the different actors and users. On the other hand it's editors' hope that the present papers may rise the interest in these subjects and stimulate further contributions from the stakeholders delivery. The editors wish all interested parties an enjoyable reading and are indebted to thank all authors and reviewers for their excellent work.