

Genomics 2020: Personalized and Precision Medicine (PPM) as a unique healthcare model to be set up via translational applications and upgraded business modeling to secure the human healthcare, wellness and biosafety- Sergey Suchkov- Sechenov University

Sergey Suchkov

Sechenov University and Moscow Engineering Physical Institute (MEPhI), Russia

Another frameworks way to deal with sick states and wellbeing bring about another branch in the social insurance administrations, to be specific, customized and exactness medication (PPM). To accomplish the usage of PPM idea, it is important to make an in a general sense new procedure dependent on the acknowledgment of biomarkers and in this way the objectives to make sure about the stupendous eventual fate of medication plan and medication disclosure.

Every chief qualities the effect of their choice to utilize PPM on their own financial plan and prosperity, which may not really be ideal for society all in all. It would be very helpful to coordinate information collecting from various databanks for applications, for example, forecast and personalization of further treatment to accordingly give increasingly custom-made measures to the patients bringing about improved patient results, decreased unfriendly occasions, and more financially savvy utilization of the most recent medicinal services assets including demonstrative (partner ones), preventive and restorative (directed sub-atomic and cell) and so on.

PPM, genomics and AI are those of the most rapidly emerging areas of biomedical research and the most promising technologies for improving health care and health outcomes. Models incorporate the utilization of AI for improved DNA sequencing and SNP examination to target explicit cell and tissue types, biosensors for explicit particles in vivo, and purpose-of-care atomic analytic gadgets empowered by genomics-and AI devices.

The enormous development of genomics research has raised great expectations concerning its impact on PPM aiming to customize medical practice with a focus on the individual, based on the use of genetic tests, identification of genomic biomarkers, and development of targeted drugs. **Personal genomics** is an area of genomics focusing specifically on the sequencing and analysis of one person's genome, and then giving them their genomic information.

The emphasis on individuals and genomic knowledge needs to be counterbalanced with the subjects' understanding in their sociocultural, political, and economic contexts and with the equivalent investment in actions on the social determinants of health. The above-mentioned areas being an integral part of PPM is really an **interdisciplinary** research field that results from the application of the innovative genomic and AI tools to medicine and has the potential to significantly improve some canonical

treatments, prevention, prophylaxis and rehabilitation. Specifically, in the field of PPM, it is expected to have a great impact in the near future due to its multiple advantages, namely its versatility to adapt a drug to cohorts of patients and/or persons-at-risk. For instance, **multimodal genomic** and **AI-driven** approaches may indeed become a key driver in harmonizing the needs of the various stakeholders by allowing cost-effective delivery and monitoring of drug efficiency and safety, and close-meshed high-quality data collection.

Personal genomics can be used to advise couples wanting to have children. By knowing the risk of passing on a genetic disorder to their child, they may decide to investigate other ways of having a baby, such as **in vitro fertilization (IVF)**.

Meanwhile, **personalized genomic medicine and surgery (PGMS)** represents a new approach to health care that customizes patients' medical treatment according to their own genetic information. This new approach is the result of increased knowledge of the human genome and ways this information can be applied by physicians in the medical and surgical management of their patients.

Currently, personal genome sequencing and testing is a relatively niche market with a number of services available over the internet. However, the commercialization of personal genome sequencing is set to grow and, in future, it could become a routine part of clinical practice.

Genomic research and thus the market offer clinician's new techniques for risk assessment and disease classification. However, the scope of this new testing paradigm remains to be determined. Genetic tests should be seen as the latest set of tools to assist clinicians and patients in the decision-making process. Some genetic tests will undoubtedly play an important role in identifying individuals with high risks for preventable disease, or in refining clinical diagnoses. Irrespective of the number of genetic tests that prove clinically useful, genomic research will continue to provide essential new information about how and why diseases occur.

The promise of PPM is well understood and exists at the convergence of genomic sequencing, biomarker re-research, and big data analysis. One of the big challenges to bringing more lifesaving PPM-based treatments to patients is that the vast networks of hospitals, foundations, and other organizations working toward new treatments and cures lack consensus on how

to pursue their common goal. As a consequence, duplicative efforts and inefficiencies proliferate in this network. It will take a business mindset to overcome these obstacles.

A medicinal service is experiencing a change, and it is basic to use new innovations to help the coming of PPM. This is the purpose behind creating worldwide logical, clinical, social, and instructive activities in the territory of PPM and TraMed to evoke the substance of the new pattern. The last would give a one of a kind plat-structure to discourse and coordinated effort among thought pioneers and partners in government, the scholarly world, industry, establishments, and illness and patient backing with an enthusiasm for improving the arrangement of medicinal services de-attire on one hand and medication revelation, improvement, and interpretation, on the other one, while instructing the approach network about issues where biomedical science and strategy cross.

By virtue of treating each person's condition as unique, personal genomics and PPM require health professionals to understand the nature of the data, its health implications, and its limitations. But the public understanding of the scope and impact of genetic variation has not kept up with the pace of the science or technology. We examine several venues for information, including print and online guides for both lay and health-oriented audiences, and summarize selected resources in multiple formats. We also stress that implementation of PPM thus requires a lot before the current model “physician-patient” could be gradually displaced by a new model “medical advisor-healthy person-at-risk”. This is the reason for developing global scientific, clinical, social, and educational projects in the area of PPM to elicit the content of the new branch. In short, PPM will transform the way doctor’s practice and will shake up the entire pharmaceutical value chain.