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Personalized and Regeneration Medicine require a Coagulum-OMICs Model

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ABSTRACT

Background: In 2017, a program on patient blood management was posted to the National External Quality Assurance Scheme conference for hemostasis and thrombosis. This subsequent coagulum-OMIC framework is a standard for predictive value within personalized and regeneration medicine. An OMIC model is a foresight by the author of this program to achieve OMIC. This model sustains the success of Coagulum-OMICs when supported with the ISO 9000 series. *Study:* ISO 9001 and 9004 are powerful tools to identify and define good practice in an OMIC model. ISO 9001 is a process based standard and an ideal standard for OMIC interfaces. The greater challenge in haemostasis and thrombosis is the end to end process involves several parts of healthcare under different clinical management or vendor arrangements. The flexibility of ISO 9004 makes it an ideal tool to access Coagulum-OMICs and sustain the success of personalised and regeneration medicine.

Key words: Hemostasis, Thrombosis, coagulum-OMIC framework

INTRODUCTION

Background: In 2017, a program on patient blood management was posted to the National External Quality Assurance Scheme conference for hemostasis and thrombosis. This subsequent coagulum-OMIC framework is a standard for predictive value within personalized and regeneration medicine. An OMIC model is a foresight by the author of this program to achieve OMIC. This model sustains the success of Coagulum-OMICs when supported with the ISO 9000 series. Study: ISO 9001 and 9004 are powerful tools to identify and define good practice in an OMIC model. ISO 9001 is a process based standard and an ideal standard for OMIC interfaces. The greater challenge in haemostasis and thrombosis is the end to end process involves several parts of healthcare under different clinical management or vendor arrangements.

The flexibility of ISO 9004 makes it an ideal tool to access Coagulum-OMICs and sustain the success of personalised and regeneration medicine. Program Development: A strategy for Research, Family, Organ and Acute Coagulum-OMICs commences biphasic policy objectives for genomics as a primary care with viscoelastic science, coagulum and platelet proteomics. Model OMIC development, resources, performance review and innovation, become learned. OMIC teams self-assess the Coagulum-OMICs to identify conformity with the model. Regional committees are supported by a joint working group on quality assurance to manage or improve OMICs. Conclusion: A model for blood coagulum-OMICs is a benchmark to sustain excellence in the future of biological systems.

The agility of Coagulum-OMICS to transverse primary and secondary care with genomic [pharma] pre-exams and viscoelastic or proteomic exams makes it a perfect learning initiative, selfassessment tool and governance program. The caveat is a need for expertise to sustain the success of coagulum-OMICS, in situ, with personalised and regeneration medicine. Precision medicine (PM) is a disruptive concept that takes into account both individual variability and population characteristics to provide personalized care; this approach widens biological knowledge and explores the great diversity of individuals. PM comprises the customization of healthcare for an individual on the basis of measurements obtained at the individual level. However, it also uses the data and learning retrieved from the rest of the population. Hence, PM relies on both biological individuality and population knowledge to provide tailored healthcare. One of the goals of PM is to use the ever-growing understanding of biology to provide patients with accurate and personalized interventions. All PM strategies include the use of decision-making processes based on biomarker-driven approaches. Genes, gene expression products (i.e., transcripts and proteins), and metabolites are the main biomarker families. Given this molecular diversity of biomarkers, the increase in high-throughput omics technologies offers an amazing opportunity to capture the whole picture of biological systems in a hypothesis-free and unbiased mode.

These global strategies are, conceptually, clearly disruptive compared to the current ones, which are mainly hypothesis-driven and, thus, intrinsically reductionist. Holistic investigative methods need to be applied to multiple levels of biological information to deeply understand disease processes. The prediction of normal and pathological states in patients is based on a dynamic understanding of gene–environment interactions on individual and population scales. The new concept of systems medicine relies on global and integrative approaches for patient care. A biological system can be fully understood only if the space and time scales are considered. It gives an overview of the multi-scale perspective of systems medicine. For centuries, biological sciences independently addressed the different parts of life systems and physicians viewed and addressed diseases. Global information retrieval allows contextual pathophysiology understanding of the disease for better diagnosis and treatment. Structure, organization, and function descriptions should be considered for a complete understanding of a given biological system. The structure involves basic biomolecules (genes, gene expression products, proteins, and metabolites). The topological connections between these molecules define the organization. The function reflects how the system evolves with regard to metabolic fluxes and environmental stimuli. In-born errors of metabolism (IEM) are an appealing model for systems medicine because the disrupted pathways underlying these diseases have been described at least to some extent. IEM clinical presentations are often non-specific; therefore, appropriate laboratory tests are pivotal for making a diagnosis. However, the widespread routine laboratory diagnosis strategies are mainly represented by sequential investigation assays.