

EDITORIAL

Why start a new journal?

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The purpose of this new journal is to fill a major gap between knowledge and application of precision medicine insights. SMART-MD, an acronym for **S**ystem **M**odels and **A**dvanced **R**eport **T**echnology for **M**edical **D**ecisions”, and captures the general concept behind each manuscript.

The “gap” being addressed is between incredible amounts of biomedical information and accurate interpretation-application for practicing physicians and their patients who are developing or suffering from complex diseases. The *interpretation* relies on the precision medicine paradigm.⁽¹⁾ Application of precision medicine insights for individual patients through their physician is a primary focus of this journal.

Information Asymmetry. In economics, *information asymmetry* defined as “information relating to a transaction in which one party has relevant information that is not known by or available to the other party”.⁽²⁾ Furthermore, in markets with asymmetric information “buyers do not know whether they are receiving the service or product that is in their best interest.” This is the case of medicine today, and why precision medicine could be the solution if the information asymmetry gap is transcended.

The problems in implementing precision medicine are complex and multifactorial. And the human body and environmental influences are so great and complex that nobody can understand everything. Thus, there are multiple scientific disciplines, multiple medical disciplines and multiple subspecialties – all with huge amounts of information that is not known or often appreciated by other specialties or disciplines.

Examples of information asymmetry in medical sciences are that scientists, who work under highly controlled conditions, may not understand the high variability among patients with the same diagnosis. Physicians, who were trained under the Germ Theory of Disease model struggle with using complex genetic information in individual patients. Epidemiologist, who work with patient groups and categorical definitions of disease are not trained to calculate complex mechanistic systems in individual patients. Patients, who are arguably the consumers of health care services, are at the greatest disadvantage because of limited knowledge in any of the above disciplines. Thus, the need is for relevant information from multiple disciplines

to be identified as relevant to a patient’s condition and seamlessly transferred across intradisciplinary barriers without losing context and effect, and be integrated into a meaningful recommendation to improve the patient’s condition.

The purpose of this journal is simple: To invite expert physician-scientists, who are experts in more than one discipline, to provide insights into how they translate relevant information into practical applications for specific types of patients under specific circumstances. This information on “how I do it” must then be delivered to non-expert physicians who is evaluating a highly similar patient or condition, at the point of care, in real time. This transaction is critical to the delivery of precision medicine.

As a trainee at Duke University, one of my mentors told me that, in science and medicine a person must *earn* the right to speculate. In addition to the author’s tag line in a manuscript the Journal will support a Resource Page where readers can learn more about the authors, their accomplishments and how they *earned the right to speculate* – based on knowledge of the available “evidence-based medicine” reports, scientific principles, and extensive clinical experience in a relevant subspecialty.

Format & Utility. The Journal will publish original articles of 4 types, two brief types of ~1000 words on a specific medical topic (SMART Approaches) and scientific topics (SMART Topic Brief) and two full length types of ~3000-7000 words focused on medical topics (SMART Medical Review), and scientific topics (SMART Systems Review). These manuscripts contain defined tables, clinical pathways and clinical decision support statements for complex medical situations. **The target audience of these publications is the practicing physician caring for patients with complex conditions.**

There is a three-fold utility of the SMART-MD Journal of Precision Medicine. The first, and foremost is to provide high-quality, peer-reviewed documents for physicians, health-care professionals, and physician-scientists to obtain translational insights into human disease.

The second utility is maintenance of a **Resource site** (www.SMART-MD.com) that has detailed information about the Authors, Editors and Reviewers, plus links to

service providers who produce drugs, treatments and support services relevant to the disorders being discussed.

The third utility is the strict organization and formatting of manuscripts so that the elements can be accurately tagged, read by machines, and presented within precision medicine tools, clinical decision support devices and personalized reports as a subscription service.

Vision. New ideas and paradigms go through sequential stages. This journal is at the "innovators" stage with many key opinion leaders expected to be "early adopters". We anticipate that the quality and utility of this journal, in all three interdependent aspects will lead to acceptance of the majority of physicians and patients who want the future now.

References

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2. "Asymmetric information." Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/asymmetric%20information>. Accessed 31 Oct. 2023.