

## 1. Personalized Medicine Will Require a Paradigm Shift

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- [Betty C. Jung](#), Webmaster

Re: "[Testing Rules of Thumb and the Science of Health Literacy](#)" Baur, et al., *155:129–130*

Drs. Baur and Ostrove raised interesting issues in their editorial regarding importance of health literacy in a complex medical environment. Such issues can range from how limited health literacy or numeracy impacts the management of diabetes to improving risk perception with the use of bar graph plus a frequency format diagram when explaining breast cancer risk. Regardless, people vary in their numeracy abilities and thus require different decision making assistance.

While it is true that low health literacy has been found to result in poorer health outcomes, and some methods of communication, such as the use of percentages rather than natural frequencies, are better for explaining risk, personalized medicine will require a paradigm shift to accommodate its implications for the future of Medicine. For example, how can we improve health outcomes when regional and racial differences exist for responses to antihypertensive medications? And, how do we integrate genetic testing into the treatment of heart disease when one-third of the general population possesses the common gene variant, CYP2C19 gene, a gene that makes those who have it non-responsive to clopidogrel, a drug that prevents subsequent heart attacks, strokes and other serious cardiovascular problems in those with cardiovascular disease?

Currents methods for measuring health outcomes based on population-based estimates may no longer be valid once we realize the new parameters that personalized medicine will demand from practitioners who want to offer the best available treatment. Will genetic testing become mandatory in order to receive the best care possible, and if patients refuse testing, will they be considered noncompliant? Think of the ethical and health literacy issues involved with these scenarios. Finally, perhaps the only rule of thumb we can be sure to work is that shoring up individual patients' genetic, psychosocial-behavioral and environmental resources may be the best strategy to addressing the diseases that compromise the integrity of the human body.

Thank you for your time.

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(References available)

**Conflict of Interest:**

None declared

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