Public health implications of pharmacogenetics risk with large effect sizes.

Abstract
A new model of health care delivery that is more precise and tailored to the specific risk of individuals and the dynamic of environmental and lifestyles that keep changing. The adverse drug reactions (ADRs) is the main public health problems that required pharmacogenetics based risk assessment. In the cases of the adverse drug reactions, genetically mediated adverse drug reaction is the new medical term for Steven Johnson’s Syndrome/Toxic Epidermal Necrolysis. These severe skin adverse reactions have genetic risk with large effect sizes. This discovery changed the SJS/TEN management from the idiosyncratic adverse reactions to a predictable and preventable adverse drug reactions. In tuberculosis, the ADRs from antituberculosis drug is related directly to genetic risks in NAT2, with large effect sizes. Pharmacogenetics is also useful tools to prevent anti-tuberculosis induced liver injury and possibly increase the efficacy of standard anti-tuberculosis by optimizing the drug dosage for the patients. This large effect sizes genetics risk while uncommon, they are very useful risk assessment tools in precision medicine era.