SOCIAL DETERMINANTS OF HEALTH AND EPIGENETICS: A NEW TOOL FOR HEALTH POLICY

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Abstract: Globally, humans are struggling with the double threat of communicable and non-communicable diseases, which are presenting new challenges to public health. Public health problems are generally studied and addressed at primary, secondary and tertiary levels. Most effective results are seen with primary interventions. Public health is becoming more aware of the importance of environment-gene interactions in the ontology of health and disease using epigenetics. Epigenetics is the study of altered gene expression without change in base pairs. Be it physical, social, behavioral, or economic factors; they all influence quality of life and health of individuals and populations. That environments are changing the human health phenotype and these changed phenotypes are heritable is of concern for the future of the human race. Knowing the causes of non-communicable human diseases using epigenetics will contribute to the development of new policies to encourage prevention using primary public health initiatives that are emerging from epigenetic studies. Research and application of epigenetics shows great promise for improving population health. Continued advances in epigenetics will enhance how we understand and address the way environments are affecting the human health phenotype. For some time, health systems have been and continue to be tertiary in nature. Epigenetic changes can provide information necessary to shift the focus to social determinants of health if we are to build societies focused on health for all rather than continuing to treat diseases in the tertiary phase. Understanding mechanisms of social determinants of disease, will allow society to evolve as a health-oriented rather than a disease-oriented world. For this reason, we must enhance and apply epigenetics (physical, social, behavioral, economic) research to policy development. We will discuss how bringing social determinants together with biology can be used as new tools for public health policy.