

Personal medicine



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Personalized Medicine Personalized medicine is one of the medical models that emphasizes on customization of health care. In this type of health care system, practices and decisions pertaining to healthcare are tailored to the needs of the individual (Acharya et al, 2008). Such optimization of health care has been possible through use of genetic and other types of information pertaining to the individual, based on which therapeutic and preventive care are delivered. Traditional method of care is mainly based on trials over several individuals and these trials do not take into considerations many variables like genetic variability. In personalized medicine. even this is taken into consideration, providing scope for excellent treatment outcomes. The success of any personalized medicine is dependent critically on accurate diagnosis and this is limited by the reliability and specificity of diagnostic tests. Some of the tests useful to understand the genetics of the individual are biochemical markers and genetic diagnostic testing (Parliamentary Office of Science and Technology, 2009). Biochemical markers are useful in identify and predict the risk of disease, to assess and diagnose the severity of existing disease and to stratify patients with intentions to potentially tailor treatment. Clinical genetic tests look at selection of points on DNA which are known associations with a single-gene disease or response to a drug. A classical example case for personalized medicine is breast cancer (Willard and Ginsburg, 2009). Genes BRCA1 and BRCA2 are associated with increased risk of breast cancer and those with family history of breast cancer can be tested for these at risk genes and they can be subjected to regular screening (Parliamentary Office of Science and Technology, 2009).. Another potential case for personalized medicine is stem cell therapy where minimization of immune rejection can be done by creating a customized line of

immunologically acceptable cells from adult stem cells isolated from the patient (Parliamentary Office of Science and Technology, 2009)..

Disadvantage of personalized medicine include limitation of access to those who are likely to benefit (Parliamentary Office of Science and Technology, 2009). References Acharya et al. (2008), Gene Expression Signatures, clinicopathological features, and individualized therapy in breast cancer, JAMA 299, 1574. Parliamentary Office of Science and Technology. (2009). Personalised medicine. Postnote. Retrieved on 12th May, 2011 from <http://www.parliament.uk/documents/post/postpn329.pdf> Willard, H. W., and Ginsburg, G. S. (2009), Genomic and Personalized Medicine. London: Academic Press