Facts:

04/04

- **7 million children around the world are born annually with severe genetic disorders or birth defects. ***
- **90% of infants born with genetic disorders are found in developing countries, contributing significantly to global child mortality. ***
- **The sequencing of the human genome has been recently completed.**
- **Mutations have been characterized for most major single-gene disorders, and there is a growing understanding of the role of genes in complex diseases such as cancer, cardiovascular disease, diabetes and asthma.**

WORLD HEALTH ORGANIZATION

Genomic Resource Centre (GRC)

Genomics has revolutionized the medical sciences, introducing new possibilities for diagnosis, prevention, treatment and management of both communicable and noncommunicable diseases

Gene-based approaches and applications will have a significant impact on the future of innovation in the medical sciences and for public health, in all countries. However, dedicated efforts are required to ensure that this impact will work for the benefit of the poor, rather than to exacerbate existing inequities. The potential risks and ethical implications of advances in genomics are presently matters of global debate and interest. The World Health Organization (WHO) is one among several international organizations that have expressed concern about the widening knowledge and technology gap between the more developed and less developed countries, which could lead to the neglect of the health needs of low-income nations. WHO is therefore working to bridge this divide through building international networks that involve researchers from all over the world, and creating reliable, accessible information and knowledge-sharing tools specifically tailored for middle- to low- income countries. The **Genomic Resource Centre** is an example of such a tool, which demonstrates WHO's commitment to fostering dialogue around this issue of increasing importance, and to supporting its Member States in creating appropriate policy frameworks, based on concrete evidence, and an understanding of the relevant ethical, legal and social dimensions of genomics.

The GRC contributes to the goal of sharing the benefits of genomics to achieve the best attainable health for all people

What is the Genomic Resource Centre?

In light of the growing importance of genomics for global health priorities, WHO's Human Genetics Programme (HGN) has created a comprehensive Internet-based resource on genomics: the **Genomic Resource Centre (GRC).** The GRC's primary mandate is to consolidate information from a variety of sources and provide links through easily accessible frameworks. The Genomic Resource Centre is the first web site of its kind dedicated to providing thorough and reliable information on genomics and health to developing countries.

The mission of the GRC is to enhance the transfer of genomic information, to encourage global networks, to foster informed dialogue, and to improve health services in genetics, especially in low to middle-income countries.

The Genomic Resource Centre will play an important role in providing health authorities, policymakers, health care practitioners, patients and other stakeholders with current information about strategies and interventions for improved prevention, treatment and management of a range of health conditions with a known genetic component. It will provide balanced and up-to-date information on medical genetics services, including genetic counselling, clinical genetics, presymptomatic diagnosis, predictive DNA testing for common diseases such as heart disease and cancer, and population genetics. The GRC will aim to provide models of best practice in a variety of areas related to genetics, responsive to local needs and to ethical, legal and social considerations.

The **Genomic Resource Centre** is a platform for:

- Empowering patients, the public, and policy makers
- Creating awareness of practical health care applications and services in the areas of genomics and genetics
- Highlighting ethical, legal and social issues (ELSI) relating to genomics and genetics
- Fostering partnerships and networks
- Sharing the latest scientific research
- Promoting community education and capacity building

www.who.int/genomics

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