Human Genomics for Health: Enhancing the Impact of Effective Research
Brasilia, May 15-16

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Emerging technologies, research prioritization and support
Research for Health
Science Division
WHO
GENOMICS

• Recent technological advances enabling faster and cheaper sequencing have led to significant progress in our understanding of genetic variation, gene expression, and the role of genes in biological processes and human health and diseases.

• Genome-based knowledge and technologies and their equitable translation into affordable applications have the potential to improve human health in profound ways.
GENOMICS at WHO

- Genetically-modified foods
- Genome editing
- Data sharing
- Biodiversity
- Genetically-modified mosquitoes
- Cancer
- Rare diseases
- Congenital disorders
- Antimicrobial resistance
- Pathogen surveillance

WHO Tag-G

WHO Genomics programme of work
Support, review and provide technical guidance on activities

Recommend priority activities for consideration

Contribute to and advise on efforts in convening discussions

Bring attention to regional and sub-regional experiences

WHO Technical Advisory Group on Genomics (TAG-G)
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CHALLENGES

Poor awareness of human genomics’ benefits and value

Lack of collaboration between human genomic stakeholders

Limited financial and technological and human resources

Inconsistent equity, ethics and governance frameworks

Missing guidance to implement human genomics in research and clinical practice
WHO GENOMICS PROGRAMME

PROMOTION

IMPLEMENTATION

COLLABORATION

ELSI
COMMUNICATE
benefits and potential of genomics to
different audiences
PROMOTION

4 short explainer films to raise awareness and support advocacy

**Content:** what genomics is, its benefits for health throughout people's lives and the importance of equitable access

**Primary audience:** engaged public and decision-makers
ADVOCATE for investing in genomics
**PROMOTION**

**Key financing challenges**
- Insufficient implementation
- Investments are not prioritized
- Cost effectiveness is not well understood

**Intended impact**
- Articulate the qualitative and quantitative benefits of investing in human genomics to build the narrative

**Target audience**
- Global audience, while using country examples
- Main audience are country decisionmakers and international funders

**Key narrative to be developed**
- Investing in human genomics will cost xx over xx years
- This will deliver xxx value for specific applications

**World Health Organization**

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Economics of Genomics and Precision Medicine Unit
SUPPORT workforce education and training in genomics
MAP gaps, opportunities and priorities

GUIDE genomic implementation based on good practices and local priorities
IMPLEMENTATION & COLLABORATION

ENGAGE
stakeholders across sectors and regions

PROMOTE
a community of practice in genomics
ETHICAL LEGAL AND SOCIAL ISSUES

GUIDE

human genome data access, use and sharing
ETHICAL LEGAL AND SOCIAL ISSUES

GUIDE

equitable genomics research and practice
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Thank you