Omics and the Personalised Medicine Revolution

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IAA Health Committee Briefing Note

The Impact of Personalized Medicine and Genomics on the Insurance Industry

Aim: high level overview and intro to the topic

Released: April 2017

Genome Sequencing

Cost decreasing rapidly: from $2.7bn in 2003 to <$200 now

Applications:
- Clinical diagnostics
- Drug discovery
- Biomarkers for identifying disease
- Pharmacogenomics

Whether you like it or not: your policyholders' genomes will be sequenced soon!

Technology now well beyond genomes, and 'omics rapidly developing

General Challenges of Personalized Medicine

Genomic / omic literacy (of doctors, patients, and where relevant, insurers)

Different personal decisions (do you *want* to know?)

Discrimination (*who* should know?)

Privacy and security (who can be trusted to know?)

Which organisations have the Big Data capacity to handle this?

Impact of Personalized Medicine on Insurance

Risks of anti-selection….

….vs risks of discrimination against policyholders

Interpretation with incomplete data (e.g. lifestyle / behaviour data?)

The consequences of increased longevity, and the accuracy of long term projections

Earlier identification of disease

Higher / lower cost of treatment?

Recommendations

Learn from past experience – e.g. AIDS epidemic modelling in early 90s

Be informed about technological and clinical developments

Think hard about ethics, privacy and risks