

Framework for considering genetics in the workplace¹

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KEY WORDS

Genetics; workplace; ethics

SUMMARY

There has been a proliferation of genetic information in the last 25 years resulting in a spectrum of existing and potential uses in the workplace. These uses of have different issues and implications which may be more clearly considered in a framework that identifies three distinct uses (research, practice, and regulation/litigation) for inherited genetic factors and acquired genetic effects. Inherited genetic factors pertain to the characteristics of the genes, and acquired genetic effects to the impact on genes and chromosomes of environmental and constitutional factors. Critical in assessing the issues involving genetics in the workplace is attention on the rights of workers, validity and clinical utility of genetic information, cost pressures on employers, and societal implications. Genetic information may provide mechanistic and diagnostic insight into occupational diseases and allow for targeting high-risk groups, improving risk assessments, and providing early indicators of risk. However, these benefits are more likely to be realized and problems avoided when the different uses are considered in a framework that distinguishes them by type and content. The application of such a framework makes it easier to assess whether there is a sufficient evidence base and worker safeguards in place for any particular use of genetic information.