

The emergence and global spread of non-invasive prenatal testing: A comparative study

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Non-invasive prenatal testing (NIPT), a prenatal screening test analysing fetal DNA in a blood sample from the pregnant person, has become available in more than 60 countries since its introduction ten years ago. Some of its benefits, such as non-invasiveness meaning it is safe for the fetus, and high reliability for some conditions, are largely welcomed. Yet, NIPT also raises complex challenges.

We sought to illustrate this complexity in a review article describing the implementation of NIPT in nine countries that represent diverse cultural and health policy contexts: Australia, Canada, China and Hong Kong, India, Israel, Lebanon, the Netherlands, the United Kingdom, and the United States. This talk will discuss some salient similarities and differences identified by our review.

Our review shows common challenges – related to equitable access, decision-making about public funding, and shortage of appropriate counselling and informational resources. It also shows differences in attitudes between countries, namely toward disability, pregnancy termination, and the importance of informed and free choice regarding prenatal testing. We conclude that NIPT's implementation and uptake are influenced by many interwoven factors, such as the structure of the healthcare system; public funding of prenatal testing; sociocultural, legal, and political contexts.

As NIPT evolves from a second-tier to a first-tier screening test, and as its use expands to additional conditions, the issues discussed will be exacerbated. Therefore, as countries cope with decisions regarding what uses of NIPT they wish to allow or fund, a nuanced and contextualised discussion of socio-ethical implications is indispensable.