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DECODING THE DNA BILL

Relevant for: Science & Technology | Topic: Biotechnology, Genetics & Health related developments

Representational image.

The DNA Technology (Use and Application) Regulation Bill, 2018 has been introduced in India's Parliament this week, with a view to creating a national DNA database for use by the police in solving crimes and identifying missing persons.

Although DNA can be an important tool here, in solving crimes, it is important that there are safeguards to protect human rights and prevent miscarriages of justice. Further, creating large databases is often not a cost-effective way to solve more crimes, and limited resources must be targeted effectively.

The Forensic Genetics Policy Initiative published its report, "Establishing Best Practice for Forensic DNA Databases", last year after extensive consultation and a review of policies worldwide. A comparison with the DNA Bill reveals a number of important issues.

First, using DNA effectively during criminal investigations requires proper crime scene examination, trained and reliable policing, a trusted chain of custody of samples, reliable analysis, and proper use of expert evidence in court. Without these prerequisites, a DNA database will exacerbate rather than solve problems in the criminal justice system: for example, by leading to miscarriages of justice through (false matches or misinterpretation or planting of evidence, and diverting resources) from more important priorities.

The Home Ministry circulated a set of guidelines to States in July on how to search crime scenes and collect, store and transport DNA samples in criminal cases. However, it is not yet clear whether these guidelines will be effective. Because many errors occur before samples get to the laboratory, the requirement for laboratory accreditation in the Bill should include quality assurance for crime scene examination. Consideration should be given to an independent forensic science regulator to ensure oversight of both laboratory quality assurance and crime scene examination. There is also a need for elimination databases for police, crime scene examiners and laboratory workers, whose DNA may contaminate the evidence they touch.

The Bill's proposed DNA Regulatory Board is still too powerful and insufficiently transparent or accountable. Conflicts-of-interest should be published for each board member when appointed and updated on an ongoing basis and board proceedings should also be published. The Board's need to review the ethics of its own behaviour may conflict with its other roles: an independent ethics board should be set up. to advise it, and the ethics board's opinions should be published. Provisions which give the government or the Bboard the power to amend aspects of the safeguards in the Bill, and to avoid accountability in court, should be deleted.

The Board's responsibilities for privacy protections need an independent regulator: the easiest way to achieve this would be prior adoption of a privacy or data protection bill (which includes a role for a data protection officer). This would allow individuals some recourse if their rights were not protected. This is particularly important, especially following the Supreme Court's Right to Privacy judgment.

A number of other privacy protections are also missing from the Bill. These include the need to restrict DNA profiling so that it uses only non-coding DNA, a commonly used international

standard for one, which prevents the use of parts of the DNA which code for personal characteristics, including medical conditions. Rightly, the Bill includes provisions for the destruction of DNA samples and removal of innocent people's DNA profiles from the database. However, these provisions are currently inadequate because it is unclear how they will operate in practice: currently, the removal of innocent people's records is not automatic, and some samples will be retained by the police. Any international sharing of DNA profiles should also be covered by a privacy or data protection law, and meet international human rights standards.

Further, it is a best practice to separate the databases for missing persons and for criminals set up by the Bill, so that people who volunteer their DNA to help find their missing relatives are not treated as suspects for criminal offences. Provisions allowing the use of these databases for civil cases, for example to test paternity, should be deleted from the Bill. To maintain trust in the system, people should not be concerned that non-paternity might be revealed if they offer to assist a criminal investigation, or are accused (perhaps falsely) of a crime. This does not prevent DNA being used for such purposes, but this should be done case by case and not included in the system for a criminal database. More detail is also needed to specify that volunteers must be fully informed about future storage and uses of their genetic information before they give consent.

The Bill allows two categories of persons to have their DNA collected without consent and their DNA profiles added to the database. These are persons suspected of any offence, where an order is made by a magistrate, and persons suspected of more serious offences, where an order from a magistrate is not required. Who should be included in the database, and whether a court should always have a say, is an important matter for national debate. However, there is no attempt to assess the cost effectiveness of these provisions or to estimate the database's likely size.

The financial memorandum to the Bill estimates that there will be a one-off cost of 20 crore to set up the database, with annual costs of 5 crore to maintain it. This is completely unrealistic: for comparison, the U.K. National DNA database cost £3.7 million to run in 2015-16. International evidence shows that the success of a DNA database is driven primarily by the number of crime scene DNA profiles loaded on to it, not by the number of DNA profiles from individuals, so proper crime scene analysis should be the top priority.

In short, important safeguards and a cost-benefit analysis are still lacking for this Bill. The Bill needs further improvement, and full parliamentary scrutinyshould be utilised to achieve that end.

Helen Wallace is Director, GeneWatch UK

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