Use of Facial Recognition Technology for Medical Purposes: Balancing Privacy with Innovation

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Imagine applying for a job, and as part of your application process, your prospective employer asks for your photograph. You, as an eager candidate, comply with the request, and unbeknownst to you, the employer runs your picture through a software program that scans you for any common genetic diseases and that estimates your longevity. Alas, your face indicates that you may die young and have an increased likelihood of having Marfan's syndrome, which is associated with fatal aortic aneurysms. Other candidates do not have such risk factors, and you are denied the job.

Although this sounds like science fiction, we may not be that far off from this scenario. In the summer of 2014, Oxford scientists reported that they have developed a facial-recognition program that uses ordinary family photos to help diagnose rare genetic conditions. Under current law, it may not be long before such software is commercially available for general use, including use by employers.

First, the presentation will briefly describes this and other potential applications of facial recognition technology in medicine that have recently been explored, highlighting the recent software that may be used for genetic screening and predicting longevity. Then, I delve into the heightened need for privacy when dealing with health status, especially genetic conditions and discusses an individual's right not to know about their genetic predispositions and discuss the ways that facial recognition technology is being regulated in the United States. I conclude that the current and proposed regulatory regime for facial recognition technology is not well suited for medical applications of such technology. I examine whether health related legislation, such as the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the Genetic Information Nondiscrimination Act (GINA), or the Americans with Disabilities Act (ADA) provide adequate privacy protection from software that uses facial recognition to screen for diseases or health and concludes that they do not. Finally, I outline what kinds of restrictions are needed on use of this technology to protect patient's privacy. Such restrictions could be located within GINA or HIPAA or could be part of a comprehensive regulation on facial recognition technology in general. Whichever form it takes, such protections are needed to ensure that what could be a very helpful technology is not used to discriminate against individuals or to reveal information to a person who may not seek such knowledge.

I. Medical and Health Applications of Facial Recognition Technology

Facial recognition technology (FRT) refers to systems and computer programs that analyze images for identification purposes.[1] When one thinks of FRT, one usually thinks of it being used for security or surveillance purposes. Currently, FRT is used mainly for verification or authentication, which matches a faceprint with an individual record to identify a person.[2] This application is very useful for law enforcement to identify suspects. Another common use is for identifying an unknown person from an anonymous picture.[3] Current commercial uses of FRT include, but are not limited to general surveillance, police initiatives (such as predicting what a missing child may look like several years later), business targeted

[1] *Q&A On Face-Recognition*, ACLU (Sept. 02, 2003) https://www.aclu.org/technology-and-liberty/qa-face-recognition. The programs utilize measurements of facial characteristics to create a unique file, called a "template." *Id.* The FRT software compares the template to stored images and formulates a score that estimates the similarities. *Id.*

[2] *Id.*

[3] *Id.*