



PARTICIPATORY APPROACHES TO A NEW ETHICAL AND LEGAL FRAMEWORK FOR ICT

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# AI ISSUES FOR PEOPLE WORKING IN THE HEALTH AND WELFARE SECTOR



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# IA

- Difficult to define
- Using an algorithm to solve a given problem
- Algorithms are a prescribed set of well-defined, ordered, finite instructions or rules that enable an activity or problem to be carried out.
- Nothing new. Any cooking recipe is an algorithm.
- What is new is that today's algorithms are able to build correlations in an automated way thanks to the study of large databases.
- Very important: they create correlations, not causalities.

# SOME KEY CONCEPTS

- **Big data:** databases or combinations of databases of great complexity, size or speed of growth, which can only be adequately processed with complex mechanisms, such as machine learning.
- **Machine learning:** a type of AI that allows computers to learn by themselves, without being programmed. This makes them capable, for example, of drawing correlations between data. AI makes it possible to create an algorithm that is then used for a specific purpose.
- The difference with the usual process is that in the past, data and an algorithm were entered into a computer and a prediction was made.
- Now, you enter data and the outputs corresponding to that data and the system creates an algorithm using machine learning.

# PROFILING AND ADM

- 'profiling' means any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyse or predict aspects concerning that natural person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements;
- ADM: No definition.

# TYPES OF AI

- General AI (AGI, artificial general intelligence). Attempts to replace humans by reproducing all their capabilities more efficiently. Ex: Watson
- Weak or narrow AI (ANI, artificial narrow intelligence). Focuses on a specific task. E.g.: X-rays of body parts, stroke risk prediction, oncological diagnosis from sample...).
- By the looks of it, the weak one is working much better right now.

# LEGAL FRAMEWORK

- Oviedo Convention, Article 10 – Private life and right to information 1. *Everyone has the right to respect for private life in relation to information about his or her health.*
- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)
- Proposal for a Regulation laying down harmonised rules on artificial intelligence

# IA\_ TYPES OF USE

- Two scenarios:
  - Use of AI to make decisions in an automated manner (without intervention of the human element). Not prohibited by the GDPR but HIGHLY RESTRICTED.
  - Use of AI to support diagnosis or to determine appropriate treatment. The regulation is more permissive but, in any case, the rights of the data subjects (patients) must be respected, particularly with regard to the right to information.

# WHAT IS A DECISION MADE ON AUTOMATIC DATA PROCESSING?

- The GDPR does not specify
- The Article 29 Working Party notes that the controller cannot avoid complying with this article "by engineering human intervention. For example, if someone routinely applies automatically generated individual profiles, without having any influence on the outcome, this would still constitute a decision based solely on an automatic procedure."
- Therefore, if we do not want to talk about ADP, there must be a truly decisive intervention of the human element (ability to make an alternative decision to what the algorithm indicates)

# ARTÍCULO 22 GDPR

- GENERAL CRITERION:

The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.

# EXCEPTIONS

There might be automated decision, included profiling, if:

- a) is necessary for entering into, or performance of, a contract between the data subject and a data controller;
- B) is authorised by Union or Member State law to which the controller is subject and which also lays down suitable measures to safeguard the data subject's rights and freedoms and legitimate interests; or
- c) is based on the data subject's explicit consent.

# AUTOMATED DECISION MAKING

## Exception to the exception:

- Automated decisions shall not be based on the special categories of personal data (e.g. health and genetic data) referred to in Article 9(1), unless Article 9(2)(a) (CONSENT) or (g) (PUBLIC INTEREST) applies and appropriate measures have been taken to safeguard the rights and freedoms and legitimate interests of the data subject.
- Therefore, DECISIONS CANNOT BE TAKEN ONLY ON THE BASIS OF AUTOMATED MECHANISMS, EXCEPT FOR EXCEPTIONS (MOST IMPORTANTLY, PATIENT CONSENT and PUBLIC INTERESTS if appropriate measures have been taken).

## ART. 22

In cases where decision making based on such automated processing occurs....

"the controller shall take appropriate measures to safeguard the rights and freedoms and legitimate interests of the data subject, as a minimum the right to obtain human intervention by the controller, to express his or her point of view and to contest the decision (art. 22.3 GDPR).

# AUTOMATED DECISIONS AND PROFILING. RIGHT TO INFORMATION

- Articles 13 and 14: Information to be provided when personal data are collected from the data subject or not. The patient must be informed of: the existence of automated decisions, including profiling, referred to in Article 22(1) and (4), and, at least in such cases, meaningful information on the logic applied, as well as the significance and expected consequences of such processing for the data subject.
- Obvious question: what information must be provided? Two types
  - Logic applied
  - Consequences of the use of the mechanism for the data subject (patient)

# INFORMATION ABOUT THE LOGIC INVOLVED

- Complex question: What information should be given?
- Problems inherent to algorithms
- Professional secrecy (protected by the RGPD, recital 63).
  - Explanatory opacity: algorithms do not provide information on causal relationships.
  - Epistemic opacity.
    - Very often we do not understand what relationships they draw or how they arrive at a given conclusion
    - Sometimes we don't even know what kind of data they are using (inferred data)
- Inherent problems in the health system: does the care giver have to be the one to provide information that he/she does not possess or understands?

# INFORMATION ABOUT THE IMPORTANCE FOR THE PATIENT

- There is a second duty of information: the importance and expected consequences of such treatment for the person concerned.
- In its tenor, the patient must know what weight the use of AI has had on his or her diagnosis or on the treatment options presented.
- This should be provided always in good faith

# RIGHT TO REFUSAL AND INFORMATION ABOUT THE RIGHT

- The data subject has a right to object to automated decision-making (articles 7.3 (consent) and 21.1 (other bases of legitimacy) of the GDPR)
- The data subject must be informed of his or her right to object to the adoption of automated individual decisions that produce legal effects on him or her or significantly affect him or her in a similar way, when this right is present in accordance with the provisions of Article 22 of Regulation (EU) 2016/679.

## TO BE CONSIDERED

- Consent that relates to medical treatment should never be conflated with consent to the processing of data.
- As indicated, there may be different bases than consent for the use of AI for decision support.
- However, it should be kept in mind that the patient always has the right to object to a medical treatment and to request an alternative.
- This suggests that the use of AI in the biomedical context cannot be imposed.

# PRACTICAL ISSUES

- Despite the fact that the rule prevents the automation of decisions (with some exceptions), it will be difficult to avoid this trend in practice for several reasons:
  - Efficiency of algorithms. If they work well in general, their supervision will be reduced.
  - Defensive medicine: in case of doubt, these mechanisms offer a great line of defense for the healthcare professional.
  - Time issues: efficient monitoring may require more time than is available.
- Obviously, these problems will be exacerbated depending on the attitude of the facility's management regarding the application of these mechanisms.



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