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Digital Health

Can technology and data revolutionize our public health systems?

Recommendations: Fifteen initiatives for better use of data in healthcare

Summary

Finding the right balance: this is the challenge for legislators in regulating healthcare technology. Medical data and emerging technologies are both promising and sensitive. Promising in that their massive and rapid use will improve the quality of care and lower the costs of our health systems. Sensitive because of the innate ethical questions they raise (e.g., the possible patient re-identification).

Regulations and policy should be guided by ambition as well as caution. Rather than propose a series of technical tactics, we have organized our recommendations around four strategic pillars. For each pillar, we present several concrete initiatives that we feel are key in helping guide the decision-making of healthcare stakeholders.

1st Pillar Put patients at the center of their own medical data

2nd Pillar Continue to consolidate our national medical data infrastructure and unlock its full potential

3rd Pillar Rethink healthcare technologies approval regulations

4th Pillar Promote a technology and data-driven culture among healthcare professionals

Club Praxis

Club Praxis is a French think tank based in New York that brings together expatriate business and public policy experts whose experience abroad helps them shed light on public debate in France. Founded in 2007 by several French leaders, including Henri de Castries, Club Praxis has embraced its role as an outsider in French discourse. Its mission is to promote new and innovative ideas that will reinvigorate both democratic institutions and economies.

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1st Pillar Put patients at the center of their own medical data



1. Raise awareness among citizens in the understanding and control of their health data and to inform them on how this information can be used (i.e., how it is stored, who has access and for what type of use), as well as on the possible risks.

2. Before any usage of patient data, reinforce the principles of individual information and consent, already present in French law, which requires the express consent of the patient, not only for the use of their data but also for its storage.



3. Build a data exchange platform around the Dossier Médical Partagé (Shared Medical Records) in order to facilitate data usage while improving care, coordination, and research, always with the patient's authorization.

4. Develop "third-party-trust" mediation in the use of data in order to prevent actors from acting alone with the data and to ensure a good balance between making data available to external actors and ensuring its protection.



2nd Pillar Continue to consolidate our national medical data infrastructure and unlock its full potential



5. Promote the territorial organization of health data and, in particular, facilitate the aggregation of data from clinical studies (published and unpublished) by AI. Make reading these studies mandatory (CME credits) and structure the Clinical case exchange platforms between practitioners, aggregating practical data.

6. Continue the digitization of all prescriptions, which is one of the key strategic objectives of the health system transformation project launched in 2018 by the Minister of Solidarity and Health.



7. Simplify governance and access to the main national databases while respecting confidentiality, in particular the roles of different actors such as: the National Institute for Health Data, the ASIP, the general data administrator, the Etalab mission, and other similar organizations. Systematize the principle of “silence means approval”.



8. Accelerate the development of the “Small Business Act” of the Ile-de-France region and deploy it in other regions (e.g., promote health-related public-private partnerships to startups / VSEs / SMEs, identify hospitals for projects pilots).

9. Strengthen the principle of “sandboxes” and promote innovation by temporarily reducing the regulatory constraints and accompanying the players, similar to what has been done in the telecommunications and energy sectors.



10. Certify coders rather than the code itself, similar to the Pre-Cert program launched by the US FDA, to facilitate the release of new software updates.

11. Clarify man vs. machine legal responsibilities in health decisions and, in particular, the legal status of technologies and other AI algorithms in the event of, for example, data loss or system failure.



4th Pillar Promote a technology and data-driven culture among healthcare professionals



12. Create a system of incentives encouraging the adoption of digital health technologies through the issuance of education credits or reimbursements based on quality of care.

13. Develop practical training of health professionals around digital technology, particularly in the use of artificial intelligence, connected health devices, etc., as well as how to approach these tools with the patient.



14. Promote information sharing among all healthcare professionals via digital platforms (e.g., health information exchanges, online continuing education, etc.) or even apprenticeship, the most useful element for practical learning according to doctors.

15. Anticipate the disruption induced by the upcoming 5G technology by ensuring equal access to the population in the years 2020-2030 and anticipating the regulatory changes involved.



About the Authors

Supervision

Julien Dubuis graduated from the Ecole Normale Supérieure and received his Ph.D. in Physics from Princeton University. He is the author of several articles on information theory in biological systems. He has worked as a strategy consultant in healthcare and technology and most recently as Director in several digital health start-ups in New York.

Work Group

Julien Delpech is the founder and CEO of invivox.com, a digital platform for medical training between practitioners. He worked for more than 15 years in the pharmaceutical industry (Russia, Latin America, UK) as well as in clinical research (stem cells). An alumnus of Essec, he now lives in New York.

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Emilie Rannou is a former student of ENSAE. Currently product manager at Criteo, she helps to build a strategic vision for the development, optimization and use of machine learning (artificial intelligence) algorithms. Emilie has returned to Paris after five years between London and New York.

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Yann Coatanlem is the President of Club Praxis. He graduated from the National School of Computer Science and Applied Mathematics of Grenoble (ENSIMAG) and received the Master of Finance of HEC. He is director of research for a financial institution, president of the French House of New York, President of the American Foundation of the Paris School of Economics, Foreign Trade Advisor and Director of the European-American Chamber of Commerce.