Annex to the Health Ministers' Communiqué

Ancona, October 10-11, 2024

G7 Policy brief on Artificial Intelligence: opportunities and challenges for the Health Sector

The implementation of Artificial Intelligence (AI) in the health sector represents a major opportunity for health professionals, patients, policy makers and other stakeholders to improve operational efficiencies and healthcare outcomes. Many applications of AI in health systems are already being used, and there is growing evidence of the ability for AI systems to significantly impact diagnostic and therapeutic strategies, including the decision-making methods of health professionals, the physician-patient relationship, and disease prevention and health promotion strategies. These necessitate strong governance to address related scientific, technological, infrastructural, regulatory, legal, safety, ethical considerations and cultural barriers and challenges to realize the full potential of AI in a way that is safe, secure and trustworthy. Equitable access to digital technologies, including addressing the gender and age digital divide, as well as addressing ethical issues and potential biases in AI systems must be prioritized to avoid increasing inequalities. These efforts must include ensuring support to health professionals, patients and other stakeholders of health systems to acquire the knowledge, skills and infrastructure, needed to fully benefit from these recent advances. There is also a need to balance data security and privacy with fostering innovation. Patients and healthcare professionals must remain central to medical decisions, and to ensure regulations are not unduly complex and aligned with existing approaches in related fields when feasible. The ability of AI to use a vast amount of data and clinical evidence could help health professionals effectively and efficiently improve diagnosis, optimize care pathways and treatment from a personalized medicine perspective, reduce medical errors, improve the quality of services, including disease prevention and health promotion services, facilitating positive health outcomes through an evidence-based approach, which respects international standards and guidelines. Opportunities exist for streamlining workflow and reducing the administrative burden for healthcare professionals, and providing more time for patient interaction.

- AI could empower individuals and promote personalization of care by providing greater insights into their own conditions and facilitating the comprehension of healthcare documents and information. Furthermore, AI's ability to process rapidly vast amounts of data can unlock value from assets currently unused for decision-making. It could also promote and accelerate

research and development activities (e.g., drug discovery) and inform public health research. AI can also be a valuable tool in terms of strengthening security and safety: it can protect healthcare infrastructure by detecting unusual network activities, identifying malware, and predicting potential cybersecurity breaches. Regarding patient safety, AI algorithms could be used to monitor medical products. Therefore, as G7 Member States, we express our determination to promote the use of AI in healthcare to its full potential, to improve individual, population, and public health quality and outcomes and ease the burden on health care professionals to restore time to care and human interactions, and reduce inequalities and disparities in care access.

- Data availability which respects security and privacy issues is the first requirement for any AI system. In fact, it is not simply a matter of collecting data in dedicated repositories but of having data available in an organized, classified, and standardized manner. Comprehensive and fit-for-use data are needed, to drive higher quality algorithmic outputs with less distortion, as inconsistent and incomplete data may inadvertently amplify existing biases in healthcare data.

- In developing AI for healthcare, we encourage international cooperative efforts toward data standardization and harmonization since this process is essential for i) the training, tuning, testing, and validation of AI models through comprehensive and representative datasets to ensure accuracy, reliability, relevance, and good generalizability; ii) ensuring efficiency in multicentric studies reducing the complexity and time required for data aggregation and analysis; iii) applicability across borders.
  Furthermore, a robust cataloging system for open data is essential to support AI development.
  For a safe, secure and trustworthy use of AI, open data initiatives, as well initiatives based on FAIR Principles (for data that is Findable, Accessible, Interoperable, and Reusable), provide researchers with access to large datasets to train, tune, and test AI models, and applied research should be promoted to spur innovation and collaboration among researchers and developers. Making data available, standardized and harmonized is not simple due to technical and cultural challenges related to governance, accountability, data literacy, trust, compliance with data protection rules and security issues; all these aspects are crucial for the protection of patient rights as well as patient acceptance of new technologies. We also acknowledge the high opportunity costs patients have to bear if the potential of their health data is left untapped. We, therefore, commit to actively working on harmonizing data policies and regulations where feasible, including by building on efforts at regional and international level.

- It is critical that we strive for AI uses in healthcare to be deployed in an equitable manner and with equitable access. We recognize the benefits of using AI in the healthcare sector, but also the risks it can carry, particularly with regard to under-represented populations. AI models need to be trained on data that are representative of the populations for whom they will be used, with the aim of minimizing discriminatory biases that can complicate access to the healthcare. They also need transparency in their decision-making, in order to interpret or trust the validity of the results obtained. To overcome these challenges, we are committed to considering all means of advancing equitable access and use of AI in healthcare, in particular by fostering ways of minimizing risks of discrimination and bias. Additionally, we recognize the importance of to monitoring for biases and to assessing the impact of AI tools for health and healthcare applications during its implementation to ensure that the tools have a net benefit for the populations and use cases for which they are intended.

- We reiterate the commitment, undertaken by G7 Leaders in 2023, to further advancing the Hiroshima AI Process Comprehensive Policy Framework, including the implementation of the International Guiding Principles and International Code of Conduct for Organisations Developing Advanced AI Systems to guide the development and uptake of AI technologies, including in the healthcare sector. We note the importance of respecting human rights and protecting personal data and privacy. The development of research on AI in health systems should be done with respect for data protection, data security, and intellectual property. For the sake of research and health planning, the use of AI to process health data should be encouraged and pursued according to national and international laws and regulations. We therefore commit to actively encourage a dialogue among health professionals and regulators at different levels, including regulatory agencies and local DPOs (Data Protection Officers), to promote data sharing, data security and data protection to ensure we can capitalize on the full potential of AI in health care.

- Ethical aspects of using AI should fully be taken into consideration with special regard to: i) respect and protection of public interest; ii) inclusion, empowerment, and health workforce optimization, without dispersing its traditional competencies or decision-making abilities; iii) equitable and accessible services for people; iv) respect for privacy, including patient consent (in decision making), and clear data management goals and data protection rules.
- Ethical considerations are pivotal for the use of AI since human oversight of AI tools remains a key consideration to help identify and correct biases,

while ensuring fair and equitable recommendations. In this regard we welcome the “G7 Toolkit for Artificial Intelligence in the Public Sector” produced by the G7 Digital & Technology WG.

- Since patient-doctor interaction is profoundly affected by AI, legal considerations on the need and methods of informing patients regarding the use of AI systems and, above all, on the aspects of legal liability in the event of an error by the algorithm should be deeply investigated. We recognize the need to promote education of both healthcare professionals and patients, as well as awareness about the real benefits and lesser-known limitations of AI systems, to improve transparency and avoid disputes in the future.

- Digitization and data sharing have also led to the emergence of cyber-crime in the healthcare environment. We recognize the importance investing adequate funds and professional resources in cybersecurity, including promoting training courses at different levels, including professional healthcare. We also support the strengthening of cooperation mechanisms and harmonization, where possible, of national and international regulations

- Uncontrolled and unregulated development and deployment of AI systems in healthcare can pose serious risks for healthcare professionals and patients. This is the reason why legal frameworks have been updated or developed and incorporating OECD AI Principles, which promote the use of AI that is innovative and trustworthy, and that respects human rights and democratic values. We support the development and use of safe, transparent, traceable, human-centric, trustworthy, non-discriminatory, and environmentally friendly AI systems; the incorporation of Health Technology Assessment principles for the validation of AI should be fostered and promote HTA agencies to be better prepared to evaluate the use of public resources in the applications of AI systems to healthcare. We also believe that careful post-market safety monitoring and surveillance is critical, considering the intrinsic specific nature of AI-based software.

- The “digital gap” of healthcare professionals and the general population with regard to AI systems is likely due to a combination of poor knowledge of technologies due to rapid developments, lack of understanding of possible applications, and lack of incentives and support to implement digital solutions. and distrust in technology. We welcome educational initiatives for health care professionals, regulators, researchers, and developers to improve knowledge and skills in the field of AI and increase trustworthiness in AI systems. These programs should cover

interdisciplinary topics, including data science, machine learning, healthcare systems, and regulatory frameworks. We support the launch of communication campaigns dedicated to the general population on the use of AI in healthcare through traditional and social media. To overcome technological mistrust, we actively support data transparency, impartiality, fairness, data governance, privacy, responsibility, safety, and ecological-environmental sustainability initiatives. Similarly, we recognize the need for people to increase their AI literacy, including the knowledge and skills necessary to empower patients to benefit from AI technology in healthcare with educational programs that are culturally sensitive and respect diverse backgrounds.