Healthcare Interoperability Design -20312

Abstract :

As an individual, you generate an infinite amount of data throughout your lifetime, some of which may be outside of your awareness. However, as a patient, you are responsible for creating over one million gigabytes of health data in your lifetime.[1] This magnitude of data highlights the potential for revolutionizing the healthcare industry at the community, state, regional, or national level. Unfortunately, the issue of "interoperability" plagues this data-generating industry, making it far from simple to achieve this revolution. Recognizing the interdependent relationship between Design and Data, we worked with the state of Minnesota Department of Human Services as a test case to tackle the challenges and unleash the potential of Healthcare Interoperability. Our team placed deliberate intention into every design choice to develop a patient-centered solution that addresses the challenges of data security, data standardization, interconnectivity, convenience, policy and accountability, and API support.

Our goal is simple: design a system that empowers patients by giving them greater control over their healthcare data; an interface that acknowledges them as foundations of healthcare interoperability. Prioritizing security concerns, we aim to provide users with equitable, measurable, and relevant abilities to input, interact with, and archive their healthcare data. In keeping with our commitment to maintaining transparency, we implemented simple design choices to our interface. With slight variations, this will be extended to the appropriate channels where the patient's data is shared, of which are: healthcare providers, insurance companies, financial institutions, policy makers, and governmental public health institutions; in that order.

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[1] Nasr, L., & Ramachandran, M. (2016). Cognitive Computing and the Future of Health Care. IEEE Pulse, 7(1), 35-39. doi: 10.1109/MPUL.2015.2506360