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Flipping the stack? Can new technology drive health care's future?

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Over the past twenty-five years most businesses have been revolutionized by the easy availability of cloud and mobile-based computing systems. Hospitals and health systems were late comers to the enterprise technology game. However, the hospital sector is likely to move towards the trend of using the cloud seen in other businesses. Beyond this a newer generation of technologies include AI (artificial intelligence), VR (virtual reality) and AR (augmented reality), all built on top of cloud computing. Also built on the cloud is the Internet of Things--physical sensors distributed everywhere, such as in smart speakers (Alexa, Google Home), clothing, video cameras, thermostats, medical devices, and more. These enable new types of remote monitoring and management, which are themselves making use of the new capabilities of cloud computing, real-time analysis and AI. The companies with the most advanced technology in AI, voice recognition, sensors and cloud computing are the same ones which have benefitted from the cloud revolution. Concurrently there is huge speculation about what Amazon, Apple and Alphabet/Google will do in health care. There are several obvious scenarios in which new market entrants can change health care but the one in which they take a major role we call "Tech inverting the stack". Starting with technology, the sensors, trackers, AI systems and processes are soon going to be in place monitoring, measuring and suggesting next steps to both providers and patients. In general, this will move health care from being an event driven system to becoming a consistent process. Theoretically "normal' patient behavior and activity will not need any response, whereas exceptions and problems will require intervention from a combination of human and machine services. Finally, care delivery – the clinical interventions that make up health care are we know it today – will become an added extra to the top of the health care stack. In this scenario, the tech platform is the underlying system, with services and professionals on top. There's no real reason to think it can't be done, and there's no reason to suppose that if it is done it won't radically reduce doctor visits and hospital admissions, and improve patient care. And of course it will have huge implications for the future sociology of health care.

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