mHealth Opportunities for Physician-Scientists to Transform Medicine

By Jennifer Kwan and Steven Steinhubl

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“...if we weren’t doing it this way already, would this be the way we would do it now? In society this applies to 9-5 jobs, the electoral college. In medicine this applies to the treatment of patients and the culture of being paternalistic vs engaging of patients as partners in their health, and how patient biometric data is obtained and applied (traditional snapshots vs continuous monitoring). In biomedical research: this applies to shunning of negative data in favor of positive data. Does this contribute to loss of insightful data and/or wasteful data. Would this be the way we were doing it already, would this be the way we would do it now?”

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Medicine and healthcare are changing at a rapid rate. Powerful tools are emerging today, that did not even 5 years ago. Nanotechnology, supercomputers and shotgun sequencing are some of the tools available to physicians and biomedical researchers that enable us to manage disease and discover the meaning of molecular signatures in health and disease at the individual level. mHealth tools will be a key component, along with molecular biology, that will enable truly personalized medicine. Are we ready to embrace these tools/practices cultures to better medicine and the biomedical research enterprise?

A cultural revolution is coming. Patients are benefiting by being empowered to be active participants in their own care and these mHealth tools have the potential to allow patients to better manage disease and prevent adverse outcomes [2-3]. The push for preventive health has been strengthened by the Affordable Care Act. mHealth tools provide tremendous potential and their accessibility is expanding (exploding?) daily. There are ~16k mHealth apps, while <1% get ~50% of the downloads [4].

At the same time, many new telemedicine services are popping up, including virtual visits, app to schedule a house call by either a nurse or doctor, avatar tasing services [5] and these industries are garnering an increasing percentage of healthcare Venture Capital investment [6]. Recently, the Centers for Medicare and Medicaid increased reimbursement for telemedicine/ mHealth services to $135 billion by as of Nov 2014, with telemedicine market to 36 billion globally by 2020 [7]. It’s time that the utility behind mHealth tool and telemedicine use, evidence is being called for.

The mHealth conference at Scrips was organized by mHealth pioneers, Steven Steinhubl MD and Epic Tepol MD, physician scientists who have teamed to provide evidence on the impact/role of mHealth tools/ technologies in patient care, from better management of diabetes and hypertension to preventing re- hospitalizations from heart failure. The meeting also achieved the goal of assessing the current state of mHealth technology, research, and Dr. Steinhubl in Washington DC that will feature the latest evidence in mHealth studies and complement with policy aspects needed to truly optimize and leverage these tools.

- The APS Policy Chair is organizing an event with ACTS and Dr. Steinhubl in Washington DC that will feature the latest evidence in mHealth studies and complement with policy aspects needed to truly optimize and leverage these tools.

- Want to hear the latest cutting edge mHealth studies and the synergistic disciplines that can enable its optimal use in patient care to promote health and prevent/better manage disease?

- Take us at Scrips next year for an incredible mHealth conference held in La Jolla CA (left) with attendees checking in at registration (top left). Panel featuring Babak Parviz PhD, John Scully, Walter De Brouwer PhD, Robin Cook MD and Epic Tepol MD addressing digital medicine and future of medicine (red photo from left); Jennifer Kwan pictured w/Eric Topol and Ronnie Knowlton. Wendy Nelson PhD of the NSF discussing individualizing care via Big Data (5th picture from left); Attendees networking during reception (6th from left); Zubin Damania MD aka ZDogg premiered his EHR music video at the conference (7th from left). Robert Boxer of “Pager” discussing UBER for doctors (8th from left). Device showcase and VisiMobile display (9th and 10th from left).