Technologized Talk:
Wearable Technologies, Patient Agency, and Medical Communication in Healthcare Settings

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ABSTRACT

In this study, the authors examine patient use of and feelings about wearable technologies for health attainment and management. Based on an online survey of 81 patients using wearable technologies to track and manage health, as well as interviews with three patients utilizing wearables for health management, the authors examine how wearable technologies are being used by patients to attain health, manage health, and/or prevent health issues, and what value users find in these wearable technologies. The authors also examine how such use is impacting communication between medical professionals and patients. Specifically, the authors explore how the inclusion of wearable technologies has changed the "rhetorical relationship" between patients and medical professionals. The study concludes with a discussion of the future of wearable devices in patient-medical practitioner relationships and clinical settings.

KEYWORDS

Consumer Personalized Medicine, Health Management, Medical Communication, Medical Professionals, Patient Agency, Patient Communication, Quantified Self-Tracking, Rhetorical Relationship, Sociotechnical, Technology, Wearable Technologies

INTRODUCTION

In November 2017, the U.S. Food and Drug Administration (FDA) announced its approval of Abilify MyCite, the first human-ingested digitally trackable pill. Within the pill, a sensor records that the medication has entered the patient's body. Abilify MyCite is designed for use with patients in the treatment of schizophrenia, bipolar I disorder, and, possibly, as a supplement to depression management. Once ingested, the pill communicates from the pill sensor to a wearable patch, which then transmits information to a smartphone. Patients and approved caregivers and physicians can access the medication ingestion information through a web portal. In its press release about Abilify MyCite, the FDA noted that "Abilify MyCite's prescribing information (labeling) notes that the ability of the product to improve patient compliance with their treatment regimen has not been shown" (FDA, 2017).

The approval of Abilify MyCite brings up important questions of patient compliance, patient-physician communication, and patient privacy. While the ability to track medication ingestion is promising for many cases, patients may find a wearable so "all knowing" and invasive to be problematic. Although medication is prescribed in the interest of the patient, concerns about surveillance at this level are real and unprecedented. In the instance of Abilify MyCite, we are faced with an example of a wearable technology and associated tool that can potentially help bridge gaps

in medication compliance. However, the question remains: will patients be willing to comply with such tracking? And how might this particular type of wearable technology complicate—rather than facilitate—communication between patients and their doctors?

Abilify MyCite may seem an extreme example of the potential invasiveness of wearable technologies, but, at all levels, wearable technologies continue to redefine what it means to be human and what it means to "know" about one's body through the collected (and possibly shared) data. Through wearables, embodied computers, smart jewelry, and other devices, we can track, analyze, and modify behaviors impacting our physical and mental health, productivity, communication, and daily routines like never before. As such, we are moving towards a truly technologized state of being and identity.

In the realm of health communication, particularly when we consider the data we can now gather about our bodies and health through wearable technologies, the impact of wearables on the patient/medical practitioner relationship is shifting in unprecedented ways. Abilify MyCite is just one example. Mobile health applications, health and fitness trackers, and even telemedicine is all shifting how and when we make health decisions, as well as who we consult (or do not consult) and when. As users, many of these technologies collect and provide us with data for which we may have had to consult a medical professional to gain access in the past, increasing the level of control many of us feel we have with regards to our bodies. Wearables are thus shifting our sense of agency about our own health. For those of us with a stake in the current and future development of the next generation of medical practitioners, considering the ways wearable technologies have changed the rhetorical relationships among patients and medical practitioners is particularly important.

Scholars in professional and technical communication have long explored the rhetorical relationships among and between individuals, groups, systems, organizations, and institutions, among other things. By rhetorical relationship we mean a relationship that likely changes based on changes in the rhetorical situation on which it relies. Bitzer (1968) described the rhetorical situation as "a natural context of persons, events, objects, relations, and an exigence which strongly invites utterance" (p. 5). A rhetorical relationship, then, is one that changes when one of these components of the rhetorical situation on which the relationship is based shifts in some way: context, persons involved, events, objects, relations, exigence. Perhaps the people involved change; for example, a shift would occur if a patient gets a new doctor. Perhaps an object around which the relationship has in the past been based upon changes or goes away; we would see a change if a patient gets a new pacemaker. Perhaps the relationship among the people involved evolves in some way; a shift would occur if a patient uses a wearable technology to develop more expertise about her health and uses it in discussions with her doctor. If a patient has an encounter with a doctor at a clinic or hospital, we typically would define that encounter as "doctor/patient relationship." However, the term "doctor/patient relationship" is in fact shorthand for the rhetorical relationship that develops as a result of a particular rhetorical situation. That is, "doctor/patient relationship" is shorthand for the context, persons involved, events, objects, relations and exigence, including professional and legal factors that help patient and medical professionals shape their expectations of each other. Implicitly or explicitly, trust and levels of expertise are important components of this relationship. Later in our discussion, we will see how trust and levels of expertise become particularly important variables in the changing rhetorical relationship among patients and medical professionals.

A few examples are a useful way to elucidate what we mean by a "rhetorical relationship" in the context of this study and in the context of this research area. In 2000, for example, focusing on HIV/AIDS policy, Grabill argued for what "activist" technical writing might look like if we were to understand "policy making as a function of institutionalized rhetorical processes…" He described particular institutional formations as "local manifestation[s] of more general social relations, a nodal point in what [he] would call a rhetorical relationship between general social (if not sociological) processes and local practices" (Grabill, 1999). In this case, "rhetorical relationship" refers to a relationship among processes, practices, institutions, and social relations in a particular context.

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