Executive Summary

No one will argue that there is growing stress on today’s global healthcare model to effectively respond to a confluence of demographic and metabolic disease factors, as well as the aging population, rising costs, government intervention and “pill and vaccine” treatment environment.

To avert a meltdown, today’s reactive construct must be replaced by a new pro-active patient wellness ecosystem, centering on patients through forward-looking business processes and technologies. The following discussion explores how a new commercial model, incorporating the Internet, mobile communications, social networking and a change in business paradigm can help healthcare providers improve outcomes, arrest cost and maintain compliance.

Bracing for the “Perfect Storm”

Today’s healthcare industry is headed for a “perfect storm,” wherein it will become increasingly impractical to sustain functionality under the status quo. Consider:

• In the U.S. alone, healthcare costs are expected to reach 20% or more of GDP by 2017 ($4.3 trillion).

• Chronic diseases such as diabetes, asthma, cardiovascular disease and cancer represent 75% of the costs; more than 60% of the U.S. population will have one or more of these diseases by 2025.

• In Brazil, Russia, India and China, chronic disease rates are even higher.

• In the West, high fat diets, increased calories and sedentary lifestyles contribute to chronic diseases such as obesity, diabetes and cardiovascular disease.

• Medical outcomes management (pay for outcomes vs. procedures) will become the default response of public insurance plans and private payers.

• Increased government regulatory and reporting requirements are over-burdening the system.

• Employers are responding with cost-shifting and tiered premium strategies to alleviate the squeeze.

In light of the above, the days of traditional, research-driven, pure-play therapeutics are numbered. A shift from physician-centric to patient-centric delivery is imminent. Senior leadership among pharmaceutical companies have acknowledged as much.

The Shift to Patient Wellness

Recent activity among pharmaceutical companies confirm the sentiment that a new, patient-centered approach to wellness is on the horizon:

• Johnson & Johnson’s acquisition of HealthMedia in 2008.

• The subsequent announcement a year later that their wellness and disease prevention business would operate as a separate unit.
• Pfizer’s alliance with Keas to collaborate on the development and delivery of personalized online “CarePlans” directly to patients.

• Merck’s launch of two wellness-related apps on the Apple App Store focused on diabetes and migraine.

• Sanofi-Aventis’ launch of an app on the Apple App Store aimed at helping diabetics manage their calorie and carbohydrate intake.

These moves alone are telling, but they are only a start. To effectively navigate the “perfect storm,” the industry must address the entire spectrum of patient and family caregiver needs, as well as their relationship to other players and information in the system.

Figure one (below) shows the deeply fragmented healthcare system we face today. As patients and caregivers struggle to piece together autonomous entities, time and money are wasted, and outcomes suffer. Instead, a cohesive web of information and services is required to more efficiently and effectively serve patients throughout their “disease careers.” We believe the desired elements of this new “wellness web” include:

• Monitoring and coaching to help change or reinforce healthy behaviors – especially medication compliance and adherence.

• Data capture for accurate diagnoses, histories and tracking.

• Education and incentives to increase patient and caregiver knowledge and treatment compliance.

• Support network connectivity, increasing access to the right healthcare resources at the right time.

• Analysis and reporting that promote deeper understanding of patient behaviors and their impact on outcomes.

Having worked side-by-side with some of the most prominent and respected organizations in the life sciences and healthcare industries for years, Cognizant strongly believes that this new wellness ecosystem will be information- and knowledge-intensive, characterized by a deeper focus on prevention and management of specific diseases, as opposed to simply treatments. It will be richly connected to immediate stakeholders and promote patient wellness through greater interactivity and involvement.

The emerging wellness ecosystem will also be aligned more closely with the objectives of the

![Fragmented Healthcare System](image-url)
recently enacted Patient Protection and Affordable Care legislation, which emphasizes patient wellness and prevention, along with outcomes-based compensation for physicians.

**Encouraging Medication Compliance for Improved Outcomes**

Perhaps the greatest impact a patient wellness ecosystem would make in countering the “perfect storm” would be to improve outcomes as a result of increased patient medication compliance.

A recent article in the *New England Journal of Medicine* stated: “…improved adherence can lead to improvements in health outcomes and reductions in healthcare spending. Engaging and supporting patients in improving their adherence is critical to improving health outcomes.”

Conversely, poor medication compliance results in significant avoidable hospitalizations (estimated at $100 billion annually in the U.S.), increased quality of life issues and degraded task performance among workers. It also negatively affects family members, adding stress and anxiety and further derailing outcomes.

**Four Essentials of a Patient Compliance System**

Independent studies and limited clinical trials show a strong positive correlation between patient-centered coaching and education and improved outcomes. In addition, coaching coupled with mobile technologies has yielded dramatic short-term results. The data reveals that the key to improving compliance depends on changing negative patient behaviors through appropriately timed interventions. These interventions may take any of four essential forms:

1. **Patient Education and Awareness** - Aimed at providing the patient with sufficient knowledge and tools to self-manage medication compliance, nutrition and exercise. Usually conveyed at the point of initial evaluation and diagnosis, however, evidence suggests improved outcomes among long-term patients receiving “refresher” education five years or more after diagnosis.

2. **Wellness Coaching** - Available for some non-deployment related chronic conditions that have serious co-morbidity issues if not aggressively managed; usually provided at initial diagnosis. A study of colorectal, breast and prostate cancer survivors concluded that wellness coaching “may decrease psychological distress, improve quality of life, as well as self-reported health behaviors (particularly nutrition and exercise and weight) in cancer survivors.” These survivors typically deal with diseases that demand lifestyle changes beyond compliance.

3. **Integrated Patient Support Systems** - Equip peer, family and medical support systems with the adequate screening tools, procedures and capacity needed to facilitate therapy for patients managing chronic conditions especially where cognition or mental health issues exist.

4. **Social Networks** - Networks such as PatientsLikeMe.com and Diabetic Connect are proving to be critical “lifelines” to patients with serious chronic conditions. Social networks allow sharing of experiences and treatment ideas and enable contact among people (beyond providers) who understand the challenges.
Patient-Centered Wellness, Here and Now

Patient-centered wellness is feasible today through the ubiquitous connectivity of mobile technologies. Provided with appropriate communication devices and sensors, patient support systems can loop beyond provider circles, creating accountability, savings and improved patient health. In future articles, we will expand on these topics and discuss how they enable and support the evolving patient-centric wellness ecosystem.

For business stakeholders, including pharmaceutical companies, payers, providers and employees, as well as patients and family caregivers, the time to explore and test options is now. First movers in a fast-moving marketplace will benefit most.

Footnotes


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