Patient-Generated Health Data
Educational Briefing for Non-IT Executives

Executive Summary

The rapid development and consumer adoption of wearables, Internet of Things (IoT) devices, and mHealth apps are changing the health care landscape. Data from these devices—one form of patient-generated health data (PGHD)—provide a broad window into patients' health across the continuum of care. Patient and payer expectations will force providers to shift their patient care model from episodic, visit-based care to one of continuous patient disease and wellness management. As providers consider strategies to accommodate PGHD into care delivery models, they must make key decisions about how to operationalize the capture, management, and use of PGHD.

What is PGHD data? How is it used and why is it important?

According to the Office of the National Coordinator for Health Information Technology (ONC), PGHD is "health-related data created, recorded, or gathered by or from patients (or family members or other caregivers) to help address a health concern."

PGHD includes, but is not limited to:

- Treatment history
- Medication effects
- Biometric data
- Symptoms
- Activity level

Examples of PGHD sources:

- Mobile apps
- Wearables
- Registered medical devices
- Surveys and questionnaires

Why PGHD is important:

- The patient, not the provider, is responsible for capturing and recording data
- The patient decides how to share data with others
- PGHD supplements existing clinical data, providing a more comprehensive view of the patient
- Continuously collected, provides information that is less sporadic
- PGHD assists with wellness and disease management

Some of the most common uses of PGHD include:

Remote Patient Monitoring (RPM)

Event Detection and Diagnosis

Prevention and Wellness

How does PGHD affect health care providers and IT leaders?

Collecting and using PGHD have implications across fee-for-service (FFS) and value-based care models.

How PGHD can serve **FFS** models:

- **Reduce the cost of your RPM program:** Let consumers choose the devices they want—including wearables—and use open APIs[1] or data aggregators to bring the data into a repository or your electronic medical record (EMR) for care management. Adopting a BYOD[2] approach allows health providers to get out of the device management business. Patients can often get reimbursed for digital medical devices, and increasingly they are wearing smart watches and other devices as a personal choice. The strategy is patient-centric and promotes patient engagement in their care.

- **Differentiate from competitors:** Providing unique, patient-centered connectivity features helps your organization to stand out in an era of consumerism—and can improve patient care. Personalize your patient's experience by enabling them to share their health data with you online. Studies suggest that most users of wearables can see the potential value of sharing their data with their physician and would be willing to do so. Allowing patients to enter their history into the EMR via the patient portal (e.g., OpenNotes) in advance of an office visit gives patients a sense of control and ownership, and facilitates a more efficient and effective visit.

How PGHD data can serve **value-based** models:

- **Reduce utilization of high-acuity settings:** RPM programs have been shown to reduce readmissions and ED[3] visits in many cases, and providers are now incorporating wearables into the suite of digital devices used in these programs. New devices are capable of capturing an ever-increasing range of biometric data types, including activity, glucose levels, sleep patterns, and heart rhythms. These data types expand the range of clinical conditions that can be monitored, and providers are incorporating them into orthopedic postoperative recovery programs, cancer treatment programs and others. These programs will allow patients to move from acute- or post-acute care facilities to home settings sooner, reducing overall costs of care, and may help to avoid unneeded ED visits and readmissions.

- **Engage patients in disease and wellness:** Encouraging patients to share their health data electronically may help to engage some patient populations. Patient engagement is critical to population health management: engaged patients are more proactive in managing their health; engaged patients respond better to outreach to address gaps in care; and high-risk patients must be continually engaged to effectively monitor their health and living conditions. PGHD can augment your portal and engagement strategy in all of these areas.

Questions That Hospital Executives Should Ask Themselves

1 What are our objectives for using PGHD? How would PGHD solve a problem or refine our services?

2 How will we collect, interpret, and incorporate PGHD into workflows?

3 When will our clinicians review PGHD? Who will review it? What is our responsibility for acting on PGHD?

Additional Advisory Board research and support available

Report: Incorporating Wearables Data into Clinical Practice

Report: How to Get Started with PGHD for Patient Monitoring

Infographic: 3 Key Questions for Remote Patient Monitoring

Infographic: Nine Ways to Harness the Internet of Things in Health Care

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1) API = Application program interface; 2) BYOD = Bring your own device; 3) ED = Emergency department.

Source: Health Care IT Advisor research and analysis.