

Use of Patient-Generated Health Data (PGHD) in the Emergency Department

Approved By: ACEP HIT Committee

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Policy Statement

This policy statement provides guidance to ED clinicians and health systems on safe, efficient, and equitable use of patient-generated health data (PGHD), including data from wearable devices and other patient-recorded sources that may be made available during acute care encounters. Hospital and health system policies are encouraged to be in alignment with American College of Emergency Physicians (ACEP)'s policy statement. Remote Patient Monitoring is outside the scope of this policy.

ACEP believes integration of Patient-Generated Health Data (PGHD) into the acute care setting requires strict governance to ensure patient safety, data veracity, and operational efficiency. ED clinicians should be empowered to utilize PGHD as a valuable historical adjunct while being protected from liability associated with unverified data. There are many forms of PGHD and ACEP recognizes the rapid proliferation of wearable devices (e.g., smartwatches, smart rings, continuous glucose monitors) and their advancing capability to measure normal and potentially abnormal physiologic metrics and events, such as arrhythmias, oxygen saturation, and glucose levels. While these technologies offer potential value for lifestyle monitoring and self-tracking, their accuracy and reliability is variable.

ACEP supports the following considerations regarding the use of PGHD in the Emergency Department:

1. Classification as Patient-Reported History

- Measured or detected physiologic metrics and events and generated alerts by PGHD lack a clinical chain of custody and are subject to error.
- Emergency physicians should not assume PGHD are verified, validated, reliable, or diagnostic; rather considered as supplemental and patient-reported information.

- PGHD may inform clinical testing (e.g., 12-lead ECG, telemetry, medical-grade pulse oximetry) or influence disposition or treatment decisions.

2. Scope of Duty and Data Review

- PGHD entails large volumes of data often presented in non-standardized format.
- The mere availability of PGHD does not create a duty for the ED clinician to review.
- ACEP opposes evidentiary standards that hold ED clinicians responsible for reviewing or acting upon PGHD during the acute care encounter.
- ACEP recommends that PGHD be presented in summary reports or as specific alert instances rather than continuous or raw data, unless requested by the clinician.

3. Health Equity and The Digital Divide

- Reliance on PGHD should not exacerbate healthcare disparities.
- The ability to provide biometric data from personal devices should not by itself impact prioritization of patient care.
- Devices that generate PGHD should be validated in relevant populations¹.
- Education and training related to PGHD technologies including types of wearable devices, commonly measured parameters, typical alerts, as well as accessing data and recording its use should be made available to clinicians

Definitions

Patient Generated Health Data (PGHD) - “PGHD are health-related data—including health history, symptoms, biometric data, treatment history, lifestyle choices, and other information—created, recorded, gathered, or inferred by or from patients or their designees (i.e., care partners or those who assist them) to help address a health concern. PGHD are distinct from data generated in clinical settings and through encounters with providers in two important ways. First,

¹ Consumer portable device algorithms are often validated in healthy, ambulatory populations and may lack specificity in the acutely ill, heterogeneous ED population. Factors such as skin pigmentation, hypoperfusion, and motion artifact can significantly degrade the accuracy of photoplethysmography (PPG) based sensors.

patients, not providers, are primarily responsible for capturing or recording these data. Second, patients direct the sharing or distributing of these data to health care providers and other stakeholders”²

Wearable Device - “Wearable devices collect health data and analyze it in real time to help people and providers track anomalies and predict risk. Examples heart monitors that can detect arrhythmias and notify providers about potential cardiac events and watches that track sleep patterns. Other devices and digital tools can monitor symptoms for conditions like migraines and irritable bowel syndrome to supplement patient reporting, leading to better diagnosis and treatment”³.

**Remote Patient Monitoring (RPM)* - Remote patient monitoring allows a patient to collect their own health data, like blood pressure, weight, and glucose levels, using a connected medical device that automatically transmits the data to their health care provider. The provider then uses this data to treat or manage (remotely monitor) the patient’s condition.⁴ RPM data is distinct from PGHD and is outside the scope of this policy.

² Shapiro M, Johnston D, Wald J, Mon D. HealthIT. 2012. Apr, [2019-05-26]. Patient-Generated Health Data Accessed 5/11/26 https://www.rti.org/sites/default/files/resources/13629160_patientgeneratedhealthdata.pdf

³<https://www.cms.gov/priorities-innovation-key-concepts-technology-enabled-care-artificial-intelligence>

⁴ <https://www.cms.gov/medicare/coverage/telehealth/remote-patient-monitoring>