

# Request For Information (RFI)

July 6, 2022

## Integration of Patient Generated Health Data into Care Delivery Workflows

---

### I. INTRODUCTION

Consumer health technologies allow patients to collect, track, share, and control their health information electronically, enabling them to have a more active role in the management of their health and wellness. These technologies include a wide range of hardware, software, and web-based applications to record, analyze, and transfer personal health and fitness data.<sup>1, 2</sup> Wearables<sup>3</sup> have seen rapid development with products that can be adapted for clinical uses;<sup>4</sup> this includes fitness activity trackers, smartwatches, and supporting mobile health applications. Nearly half of Americans (45 percent) have used a wearable or mobile health application.<sup>5</sup>

Growth in consumer health technologies increases production of patient generated health data (PGHD).<sup>6</sup> These data are created, recorded, or gathered by patients or their family members or caregivers outside of clinical settings<sup>7, 8</sup> that can support various use cases, including preventive and health promotion activities.<sup>9</sup> The value of PGHD in care delivery comes from its integration

---

<sup>1</sup> Includes exercise, biological, and medical information.

<sup>2</sup> Agency for Healthcare Research and Quality, *Consumer Health IT Applications*. Available at: [digital.ahrq.gov/consumer-health-it-applications](https://digital.ahrq.gov/consumer-health-it-applications)

<sup>3</sup> Electronic technology or devices designed to be worn (embedded in fabric or accessories) on the user's body to track information on real time basis.

<sup>4</sup> Investopedia, *What Is Wearable Technology?* October 2021. Available at: [www.investopedia.com/terms/w/wearable-technology.asp](https://www.investopedia.com/terms/w/wearable-technology.asp)

<sup>5</sup> Gallup, *One in Five U.S. Adults Use Health Apps*, Wearable Trackers, December 2019. Available at: <https://news.gallup.com/poll/269096/one-five-adults-health-apps-wearable-trackers.aspx>

<sup>6</sup> Also referred to as person-generated data.

<sup>7</sup> Office of the National Coordinator for Health Information Technology, *Conceptualizing a Data Infrastructure for the Capture, Use, and Sharing of Patient-Generated Health Data in Care Delivery and Research through 2024*, January 2018. Available at: [www.healthit.gov/sites/default/files/one\\_pghd\\_final\\_white\\_paper.pdf](https://www.healthit.gov/sites/default/files/one_pghd_final_white_paper.pdf)

<sup>8</sup> Zeng B, Bove R, Carini S, Lee J, Pollak J, Schleimer E, Sim I  
Standardized Integration of Person-Generated Data Into Routine Clinical Care  
JMIR Mhealth Uhealth 2022;10(2):e31048  
URL: <https://mhealth.jmir.org/2022/2/e31048>  
DOI: 10.2196/31048

<sup>9</sup> Nittas V, Lun P, Ehrler F, Puhan MA, Mütsch M. Electronic Patient-Generated Health Data to Facilitate Disease Prevention and Health Promotion: Scoping Review. J Med Internet Res. 2019 Oct 14;21(10):e13320. doi: 10.2196/13320. PMID: 31613225; PMCID: PMC6914107.

into electronic health records (EHR).<sup>10</sup> This allows treating providers to identify potential health concerns early and target appropriate interventions before a potential costly care episode.<sup>11, 12</sup> PGHD can be particularly useful for patients with acute, chronic, or debilitating conditions. PGHD also provides opportunity to engage disadvantaged patients affected by chronic disease.<sup>13, 14, 15, 16</sup>

## II. ABOUT THIS RFI

The Maryland Health Care Commission (MHCC) seeks information from hospitals on innovative use cases that integrate PGHD collected from consumer health technologies with an EHR.<sup>17</sup> Use cases must support delivery of somatic or behavioral health care provided by a hospital or other care settings, including outpatient practices and post-acute providers. Use cases must meet the following criteria:

- 1) Integrate PGHD into an EHR system
- 2) Support care related to social determinants of health<sup>18</sup>
- 3) Enhance care management by supplementing PGHD with other clinical data<sup>19</sup>
- 4) Leverage services of the State-Designated health information exchange (CRISP)
- 5) Have potential to be scaled more broadly

The MHCC seeks information on PGHD use cases for planning purposes. Information collected through this RFI may be used to identify one or more use cases that could be funded in part by

---

<sup>10</sup> See n. 8, *Supra*.

<sup>11</sup> See n. 7, *Supra*.

<sup>12</sup> Office of the National Coordinator for Health Information Technology, *What are PGHD?* Available at: [www.healthit.gov/sites/default/files/onc\\_pghd\\_final\\_white\\_paper\\_infographic.pdf](http://www.healthit.gov/sites/default/files/onc_pghd_final_white_paper_infographic.pdf).

<sup>13</sup> Agency for Healthcare Research and Quality, *Engaging Disadvantaged Patients in Sharing Patient-Generated Health Data and Patient-Reported Outcomes Through Health Information Technology*. Available at: [digital.ahrq.gov/ahrq-funded-projects/engaging-disadvantaged-patients-sharing-patient-generated-health-data-and](https://digital.ahrq.gov/ahrq-funded-projects/engaging-disadvantaged-patients-sharing-patient-generated-health-data-and)

<sup>14</sup> Greiwe J, Nyenhuis SM. Wearable Technology and How This Can Be Implemented into Clinical Practice. *Curr Allergy Asthma Rep*. 2020 Jun 6;20(8):36. doi: 10.1007/s11882-020-00927-3. PMID: 32506184; PMCID: PMC7275133.

<sup>15</sup> HIMSS, *The Endless Possibilities of Wearable Technology in Healthcare*, April 2021. Available at: [www.himss.org/resources/endless-possibilities-wearable-technology-healthcare](http://www.himss.org/resources/endless-possibilities-wearable-technology-healthcare).

<sup>16</sup> Lavalley DC, Lee JR, Austin E, Bloch R, Lawrence SO, McCall D, Munson SA, Nery-Hurwit MB, Amtmann D. mHealth and patient generated health data: stakeholder perspectives on opportunities and barriers for transforming healthcare. *Mhealth*. 2020 Jan 5;6:8. doi: 10.21037/mhealth.2019.09.17. PMID: 32190619; PMCID: PMC7063266.

<sup>17</sup> The MHCC is seeking information from use cases with unidirectional integration (the PGHD technology(ies) sends data to the EHR) or bidirectional integration (the PGHD technology(ies) and the EHR exchange data with each other).

<sup>18</sup> Social determinants of health are conditions in the places where people live, learn, work and play that affect a wide range of health risks and outcomes. More information is available at: [www.cdc.gov/socialdeterminants/about.html](http://www.cdc.gov/socialdeterminants/about.html).

<sup>19</sup> For purposes of this RFI, clinical data is health-related information collected by health care professionals during the course of ongoing patient care (in-person and telehealth visits).

an MHCC grant. The RFI does not apply to existing remote patient monitoring programs. This RFI should not be construed as a solicitation for grant applications or an obligation to provide support or funding in response to it.

### III. INFORMATION REQUESTED

A response to this RFI must include complete answers for each of the seven sections that follow, not to exceed the page limits specified. Page limits do not include footnotes/endnotes or supporting information attached as appendices, which can include links to websites or online publications; information and supporting visuals of technology(ies), workflow diagrams, or supporting data (e.g., charts, maps) that justify the rationale and need for the use case.

For purposes of this RFI, use cases must use PGHD collected by patients, or their family members or caregivers, outside of a care delivery setting in combination with other clinical data collected by health care professionals during care delivery. Use cases must include an implementation strategy and timeline and plans to scale from current implementation status (e.g., add additional locations or care settings to project plan). **Responses are due by Wednesday, July 27, 2022 by 5:00 pm ET.**

**1) Profile of Primary and Secondary Organizations** *(not to exceed 2 pages)*

- a) Hospital name (primary)
- b) Other care setting(s) name(s) (secondary)
- c) Experience using PGHD in care delivery and managing the data

**2) Description of PGHD Care Delivery Use Case** *(not to exceed 4 pages)*

- a) Use case title and summary, noting need for use case and current implementation status
- b) Target patient population(s), region(s) in Maryland, and social risk factor(s) (e.g., Area Deprivation Index score or other socioeconomic measures)
- c) Type of consumer health technology(ies) and frequency of PGHD collected
- d) Approach for integrating PGHD into the EHR and care delivery workflows
- e) How PGHD will be used to inform care teams and clinical decision-making
- f) Ways CRISP can be used to support use case(s)
- g) Use case clinical quality measures
- h) Anticipated outcomes of successful implementation of use case(s)

**4) Use Case – Patient Participation** *(not to exceed 2 pages)*



- a) Estimated total number of patients to participate in the use case over a defined period of time
  - b) Patient selection criteria, including any referral source(s) used to recruit participants
  - c) Approaches to instruct patients and care team members on new technology(ies) and workflows
  - d) Tactics to achieve and maintain ongoing patient participation
- 5) Vendor(s)** *(not to exceed 1 page)*
- a) Name and role of vendor(s) and description of services to support the use case
  - b) Privacy and security safeguards implemented and maintained by vendor(s)
- 6) Personnel** *(not to exceed 1 pages)*
- a) Key staff titles of primary and secondary organizations and hours required to implement the use case
  - b) Estimated ongoing hours of support from clinical staff and use case project team
- 7) Estimated Implementation and Sustainability Cost** *(not to exceed 1 page)*
- a) Initial use case deployment cost
  - b) Consumer health technology(ies) hardware and other fees (licensing, maintenance, etc.)
  - c) EHR integration and ongoing fees
  - d) Workflow redesign and staff training
  - e) Patient education and technical support
  - f) Other fees not included above

**All responses must be received on or before Wednesday, July 27, 2022 by 5:00 pm ET.**

Responses must be emailed to Kelly Scott at [kelly.scott@maryland.gov](mailto:kelly.scott@maryland.gov)