

**To:** White House Office of Science and Technology Policy (OSTP)  
**From:** University of California, San Francisco's Center for Digital Health Innovation (CDHI)  
**Type:** Digital Health Technologies

**Re:** *OSTP RFI on Strengthening Community Health Through Technology*

The University of California, San Francisco (UCSF) is a worldwide leader in health care delivery, discovery, and education. Consistent with this public imperative, UCSF invests heavily in the development of transformative health information technology and interoperability solutions to support and improve community health delivery and equity. UCSF's Center for Digital Health Innovation (CDHI) is pleased to respond to the White House OSTP's request for information.

### Executive Summary

We believe that expanding the use of digital technologies including virtual care and remote patient monitoring can improve access to high-quality care for all patients, with a particular benefit to underserved patients and communities.

#### **Therefore, UCSF is advocating for:**

- Increased support for virtual care/telehealth to reduce barriers to access and promote equity while improving the overall quality of care
- Remote Patient Management (RPM) payment policies that reflect real-life usage of RPM for chronic disease management and reimbursement
- Continued government support for the definition and implementation of a national health information infrastructure that supports technology and interoperability standards for and between hospital and health system information technology, patient data and medical devices

### Successful Models Within the U.S. During the Pandemic

#### *Virtual Care Solutions*

Below are examples of two UCSF programs established during the COVID-19 pandemic for the purpose of improving patient access to high-quality care. Digital health programs such as these can improve the health of communities and reduce health disparities by decreasing geographic and socioeconomic barriers to receiving care.

#### **Program 1: COVID-19 Symptom Checker**

Like other health systems, UCSF faces high demand for COVID-19 testing and care. This high demand has led to bottlenecks for patients to receive care advice and services like testing. To increase our ability to serve patients throughout Northern California, UCSF created a web browser-based self-assessment tool: the *COVID-19 Symptom Checker*.

After answering a series of questions on the website about exposures, symptoms and comorbidities, patients are directed to appropriate next steps based on their predicted risk level. The Symptom Checker is fully integrated with UCSF's electronic health record (EHR) allowing patients to instantly book required tests with appointments that best suit their location and availability. This tool has been used over 75,000 times and resulted in over 30,000 COVID tests and health provider visits. CDHI continues to learn and rapidly iterate versions of the Symptom Checker to best meet our population's needs.

#### ***Community health benefits and feedback***

- **24/7 access** to triage advice and scheduling gives people greater agency for self-care and self-scheduling of appointments during times that fit their availability.

- **Equity:** Symptom Checker content is available in English and Spanish as a starting point. By shifting users to this digital tool, wait times are decreased for those who need phone support. This especially benefits those with low/no technical literacy/access, and those who need the assistance of a telephone interpreter.
- **Safety monitoring:** The design for the triage algorithm used in this tool and on the telephone hotline is based on CDC recommendations and approved by UCSF clinical experts. It is continually updated when new information becomes available. UCSF also monitors safety metrics, including sensitivity to detect medical emergencies.

## Program 2: Post Lung Transplant Home Spirometry

Lung transplant recipients risk chronic lung rejection and thus require ongoing tests at a pulmonary function lab. When facilities closed due to the COVID-19 pandemic, the UCSF Health Lung Transplant team rapidly responded by developing a remote-monitoring solution to sustain patient care and decrease exposure risk for the immunosuppressed patients.

Patients were provided with personal spirometry devices to self-measure pulmonary function. A companion conversational chatbot was developed to engage patients, track symptom information and alert patients and providers to signs of lung rejection. Patients are reminded through email/text notifications to take and report spirometry readings into the chatbot. The current reading is automatically compared to a patient's historical readings and immediate lung function feedback is displayed. If a clinical risk is detected, the patient is notified to call their provider. In parallel, the chatbot sends an alert to the patient's UCSF clinician via the EHR. This early notification increases likelihood of timely, possibly lifesaving, interventions.

In the SF Bay Area, geography and cost of travel can be significant barriers to accessing care. By pairing the UCSF home spirometry program with telehealth visits, the team has replaced six in-clinic visits per patient during the first two post-transplant years, saving significant time and money for patients.

### Barriers to Digital Health Program Adoption

#### *Lack of Data Sharing Standards and Regulatory Requirements*

1. Digital technologies have the potential to address and mitigate barriers to access for underserved communities by providing self-management capabilities and allowing for remote personalized interventions to meet the needs of patients where they live. **UCSF is advocating for the continued expansion of the United States Core Data for Interoperability (USCDI) data elements and data classes to better support U.S. population health.**
2. Longitudinal patient data collected through digital applications such as electronic monitoring devices, text messaging and self-management tools (web and mobile applications) are providing support for patient disease management, treatment, and reduced cost of care. Electronic sharing of patient generated health data (PGHD) should be integrated with clinical data systems such as EHRs, using appropriate tools, security measures and technology standards such as FHIR. Improved data standard adoption would facilitate information transfer across systems and between care organizations, promote interoperability between manufacturers, drive cost savings, and support technological innovation. **UCSF is advocating for government driven PGHD and medical device interoperability standards enabling patients to electronically share their home device data seamlessly with their clinicians.**

#### *Reimbursement Policies for Virtual Care*

The COVID and Lung Transplant programs featured above were designed and launched using UCSF internal funding mechanisms, with a goal of later realizing cost savings, efficiency gains or increased revenue. Currently, realizing revenue from reimbursement for virtual care is limited due to arbitrary restrictions on the applicable Current Procedural Terminology (CPT) codes (e.g., 99453-99458) including:

1. Remote physiologic monitoring (RPM) codes currently require monitoring on at least 16 days of the month. Some chronic conditions don't have a clinical need for monitoring that frequently. **UCSF is**

**advocating for an RPM payment policy that reflects real-life usage of RPM based on clinical necessity for chronic disease management.**

2. Managing RPM programs is time intensive. In UCSF's Office of Population Health, chronic disease management teams consist of advanced nurse specialists, social workers, pharmacists, and others who are ideally suited to manage conditions like hypertension or diabetes. Because they are not directly supervised by a physician, CMS prohibits these clinicians from billing for RPM. **UCSF is advocating for an RPM payment policy that permits reimbursement for qualified members of chronic disease management teams that may not be under direct supervision of a physician.**

## Government Action Recommendations

### *Expanding use of digital technologies for virtual care*

Expanding the use of digital technologies for virtual care can address the needs of high-risk and underserved patients, improve the quality of overall care and is a cost-effective complement to in-person care. To further expand the benefits that can be realized through virtual care models, CDHI recommends the following Government Action:

1. Support the Telehealth Extension Act (H.R. 6202), to extend and expand access to telehealth services in the Medicare Program and remove many of the burdensome restrictions on telehealth under Medicare that have been waived during the COVID-19 pandemic.
2. Remove outdated and arbitrary restrictions on telehealth from U.S. State and Federal statutes, including limits on:
  - a. Patient and provider locations
  - b. Eligible healthcare professionals and care sites
  - c. Evidence-based communication technology services and modalities
3. Reconsideration of in-person requirements to qualify for telehealth. Fraud prevention is important but should not be allowed to unduly hamper reimbursement for telehealth that provides cost-effective, high-quality care.
4. Alignment of connected health policies and incentives to accelerate transition to value-based care:
  - a. Create more flexible, holistic telehealth billing codes that focus on the benefit to the patient rather than arbitrary regulatory thresholds (e.g., 16 measurements /month).
  - b. Allow non-physicians to bill for chronic-care management via telehealth and RPM codes.
5. Increase value-based payment and bundles to promote the development of cost-saving, patient-centered virtual care programs.
6. Support reimbursement models that include technical training and support for patients using new digital technology for medical care.
7. Support for ongoing efforts to expand broadband access to all homes.
8. Expand patient data access requirements of 21st Century Cures to include medical devices, e.g., continuous glucose monitors and spirometers where standard, open APIs could advance and support telehealth and virtual care models, and where current closed vendor systems inhibit data use in a patient's care
9. Invest in the advancement of data standards for patient-reported outcomes and patient-generated device data, to enable their inclusion in technology standards such as FHIR and the USCDI, including advancing Write API standards to enable data inclusion in EHRs
10. Support connected health public policy that is technology-agnostic, forward-looking and adaptable to future applications.



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