WHAT IS REMOTE PATIENT MONITORING?

Remote patient monitoring (RPM) is a type of telehealth that allows patients to share data about their health with their care team in between clinic visits, including symptoms and vitals. Symptom tracking and monitoring technologies allow better management of treatment side effects, in turn allowing longer administration of treatments and improved clinical outcomes.

While RPM advantages are established, translation into clinical practice must account for patient preferences, equity considerations, financial sustainability, and patient/provider education needs. For the purposes of this survey, ACCC measured patient, caregiver, and provider perceptions and adoption of messaging tools, electronic questionnaires, and connected devices used to track and monitor symptoms during cancer treatment.

Who Took Our Survey?

128
90
72

More information about demographics can be found at the end of this infographic.

Adoption of RPM in Cancer Care

RPM adoption is building momentum; most cancer programs and practices reported at least early planning for this technology. Patients and caregivers are also starting to embrace digital technologies to monitor symptoms.

Stage of RPM Adoption at Cancer Programs and Practices (n=128)

40%
28%
28%

Implementing or Piloting
Considering/Planning
Not considering

Top Reported Benefits of Using Technology to Share Symptoms with the Healthcare Team

Provider Responses (n=128)
Patient/Caregiver Responses (n=162)

52% 40%
43% 31%

Keeps the care team up to date on symptoms in between appointments
Alerts the care team if medical intervention is necessary

Providers are more likely than patients and caregivers to select “improves patient outcomes” and “reduces risk of ER visits and hospitalizations as a top benefit.”

“Technology could help with side effects and symptoms that I worry or stress about—not knowing if I should be seen or [if] the cancer is worse.”
– Patient, rural setting

Are Patients and Caregivers Using Technology to Track Health Information?

- **Patient Responses (n=90)**
  - Yes: 58%
  - No, but considering: 16%
  - No, and not considering: 25%
  - Not sure: 2%

- **Caregiver Responses (n=72)**
  - Yes: 42%
  - No, but considering: 13%
  - No, and not considering: 25%
  - Not sure: 4%

Using Technology: Roles as Reported by Caregivers (n=72)

- 19% The person I care for used/is using
- 14% I help(ed) them use
- 14% I track(ed) data on behalf of the person I care for
- 11% We both use(d) technology

Timeframe During Which Patients and Caregivers Use Symptom Tracking Technology (n=162)

- 45% Throughout all of cancer treatment
- 25% Currently using during cancer treatment
- 20% For a period of time during cancer treatment (e.g., only during chemotherapy)
- 6% Started but made a decision to stop using

Most cancer programs and practices (70%) report having messaging tools and/or questionnaires and surveys available to track symptoms in between appointments, even if they do not have a formal RPM program.

Types of RPM Technology Used by Cancer Programs and Practices (n=128)

- 51% Questionnaires and surveys (e.g., portal or app-based)
- 23% Messaging tools (e.g., secure text, patient portal messaging)
- 14% Connected devices (e.g., wearables and smart devices)

Resources Used to Develop RPM Programs (n=45 programs and practices piloting or implementing RPM)

- 47% Developed technology internally
- 36% Implemented changes to the EHR to support RPM
- 29% Sourced technology from an external vendor
- 9% Procured devices for their patients

Trends in RPM Data Collection (n=95 cancer practices and programs actively planning, piloting, or implementing RPM programs)

- Symptoms (43%) and vital signs (39%) were the most frequently indicated data types collected.
- 35% offer or are planning to offer RPM to all patients in active treatment.
- 26% are using treatment type (e.g., systemic therapy, radiation, surgery, transplant) to select which patient populations to target.
- 47% are not modifying RPM data capture (e.g., questions or frequency) for different populations.

Impact on Workforce

Respondents who piloted or implemented RPM programs reported low additional work burden and minimal workflow disruption. (n=45)

- 60% reported that RPM tasks added 10 hours or less per week
- 14% reported that RPM tasks added 10 or more hours per week
- 18% were not sure how much additional time they spend on RPM tasks
Developing a Health Literacy and Clear Communications e-Course

RPM Impact on Staffing and Workflow (n=45)
- 40% Did not significantly disrupt workflow
- 24% Improved workflow
- 13% Need(ed) to hire new staff for RPM program
- 9% Our team is unable to complete necessary tasks in a timely manner

Top Ways Patients and Caregivers Seek Support with Symptom-Tracking Technology (n=162)
- 51% Meet in-person for support to set up/use
- 43% Watch a video on how to set up/use
- 38% Read brochure or printed materials with instructions
- 36% Contact technical support

Addressing Trust Concerns with RPMs
Additional education, including how to use validated electronic patient reported outcomes (ePROs) measures, may be needed to address low trust in the accuracy of ePRO data collected. Trust varies based on program type and practice setting.

Cancer Programs and Practices that Reported Trust in the Accuracy in ePROs
- 59% Of academic/NCI programs
- 55% Of programs and practices in urban settings
- 46% Of private practices
- 43% Of suburban programs and practices
- 37% Of community programs and practices
- 20% Of rural programs and practices

Addressing Privacy Concerns with RPM
Addressing privacy concerns is a key step in building trust with patients and caregivers when introducing technology to track health information. Concerns about the privacy of their health data was a top challenge for both patients (34%) and caregivers (26%).

Are Providers Engaging Patients and Caregivers?
Patients and caregivers seek varied types of education and support in using technology to track health information, and it is wise to plan different approaches to appeal to different learning styles. Engaging patients and families early in the planning process for an RPM program and throughout implementation and program measurement can help programs and practices design an equitable, patient-centered, and successful program.

Who is Seeking In-Person Support with Symptom-Tracking Technology (n=162)
- 71% Rural patients
- 58% Patients over 65 years of age
- 46% Suburban patients
- 44% Urban patients
- 40% Patients under 65 years of age

How Programs and Practices are Supporting Patients with Technology (n=45)
- 56% Provide contact information for technical support
- 53% Give out a brochure or printed materials with instructions
- 49% Give in-person support setting up/using
- 22% Provide a video on how to set up/use

Patient and Caregiver Engagement
Only 55% of programs and practices that are actively implementing RPM programs (n=45) incorporate input from patients and caregivers.
- 29% Conduct(ed) surveys/interviews/focus groups
- 18% Consulted with existing advisory group
- 16% Convened a new group to advise RPM program
- 16% Continuously collects and reviews patient feedback
- 16% No efforts
- 11% Collaborates with community-based organizations
What is Needed for RPM to Become Standard of Care in Oncology Practice

While substantial evidence exists supporting the benefits of RPM, additional evidence generation is needed related to implementation in a real-world setting. Strategies to improve equitable access, policies to support funding and sustainability, and provider and patient education to increase awareness and engagement are also needed.

**EQUITY**
“Patients have adequate/equitable access to technologies.”
– Urban Academic Program

**SUSTAINABILITY**
“Appropriate reimbursement, EMR integration, reasonable platform cost.”
– Urban Private Practice

**EVIDENCE**
“Large scale credible research studies affirming RPM improves outcomes and reduces costs.”
– Suburban Community Program

**POLICY**
“Reimbursement beyond the current, limited RPM codes. Better policies to enable practice across state lines are also needed.”
– Urban Academic Program

**EDUCATION**
“Education to rural programs about this service and how it benefits patients.”
– Urban Academic Program

Who Took Our Survey? (continued)
Cancer programs and practice staff (n=128)

<table>
<thead>
<tr>
<th>Location</th>
<th>Practice Type</th>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban (13%)</td>
<td>Community Program (40%)</td>
<td>52% Physicians</td>
</tr>
<tr>
<td>Suburban (58%)</td>
<td>Academic/NCI Program (38%)</td>
<td>13% Administrators/Practice Managers</td>
</tr>
<tr>
<td>Rural (30%)</td>
<td>Private/Physician Practice (20%)</td>
<td>11% Nurse/NurseNavigators</td>
</tr>
<tr>
<td></td>
<td>Other (2%)</td>
<td>9% Advanced Practitioners</td>
</tr>
</tbody>
</table>

34 states across the U.S. were represented.

Patients and caregivers

Patients who have or are currently receiving cancer treatment (n=90)
Caregivers who are caring for a patient who has or is currently receiving cancer treatment (n=72)

<table>
<thead>
<tr>
<th>Location</th>
<th>Patient Age (Mean = 61.7)</th>
<th>Caregiver Age (Mean = 48.4)</th>
<th>Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban (28%)</td>
<td>42% Under 65</td>
<td>75% Under 65</td>
<td>5%</td>
</tr>
<tr>
<td>Suburban (51%)</td>
<td>58% Over 65</td>
<td>25% Over 65</td>
<td>Asian (9%)</td>
</tr>
<tr>
<td>Rural (21%)</td>
<td></td>
<td></td>
<td>Native Hawaiian or Other Pacific Islander (1%)</td>
</tr>
</tbody>
</table>

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Thank you to our project partners: This program is supported by:

A publication from the ACCC education program, “Digital Tools in Cancer Care.”
Learn more at accc-cancer.org/Digital-Tools.

The Association of Community Cancer Centers (ACCC) is the leading education and advocacy organization for the cancer care community. For more information, visit accc-cancer.org.

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This publication is a benefit of ACCC membership.