Patient Impressions of AI/ML-Enabled Medical Devices

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Gathering Patient Perspectives

- Interviewed 8 Patient Engagement Advisory Committee (PEAC) Members
- Surveyed 1,827 Patient and Caregiver Connection Members

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Gathering Patient Perspectives

We asked patients and caregivers about their experience and perspectives:

- Overall impression of AI/ML devices
- Familiarity with AI/ML-enabled devices
- What are the factors considered when deciding to use devices
- How do you prefer to learn
- Any additional information you want to share

Participants reported a range of familiarity with AI/ML in medical devices:

- Not at all Familiar
- Slightly Familiar
- Somewhat Familiar
- Moderately Familiar
- Extremely Familiar
Key Takeaways

1. Participants overall impression was favorable towards AI/ML-enabled medical devices

2. Participants want to know more about what AI/ML means to the patient experience

3. Participants would like specific information about AI/ML-enabled devices to decide if and how to use them

4. Participants want to understand how their HCP fits into the workflow of the AI/ML-enabled devices
1. Participants were overall favorable towards AI/ML-enabled medical devices

- Overall favorable impressions, expressing general enthusiasm and hope

  “I think they are going to be critical to helping disabled people like me regain movement.”

- Potential to improve condition and enable them to take control of their care

  “They might help us manage our conditions ourselves, and not always have to consult a doctor.”
2. Participants want to know more about what AI/ML means to the patient experience

• What factors matter for **accuracy**?

  “[Patients should be asking] is this [clinical trial data] representative of comorbidities, lifestyle, race/ethnicity, ability to work (functional status)?”

• How is **data privacy** handled?

  “Who is selling/making money off [patient] data?”

• What are the technical requirements to **access** devices?

  “What kind of infrastructure exists to support these devices? Does the device need the [broadband] internet?”

• Is it **reimbursable** and affordable?

  “The costs associated with take home AI devices should be clear and covered by insurance.”
3. Participants would like more specific information about AI/ML-enabled devices to decide if and how to use them

- Want to know if patients like them can safely and effectively use the device without making mistakes

  "Is there anything I do that would interfere with the [machine learning] algorithm?"

- Want assurances of completeness and representation in provided information

  “I would like a technical disclosure about the evaluation of bias as part of training.”

- Want the right amount of information at the right time to keep from being overwhelmed or confused

  “I read the manual, I don’t get it... you get setup, but then you don’t know how to change things [and optimize over time]”
4. Participants want to understand how their HCP fits into the workflow of the AI/ML-enabled devices

- They **trust doctors to ensure safety and effectiveness** on their behalf.

  "Patients are more likely to take data to their doctor to interpret versus feeling comfortable altering care independently, [They ask the doctor] what do you want me to do?"

- They **want to know where their HCP fits into the workflow** of the device and their HCPs’ knowledge of, and experience with, the device.

  "[I’m concerned about] the ability of medical professionals to understand limitations of the device and properly interpret results."
Considerations for Future

• Expand the **mediums for information sharing** with patients and providers

• Expand **education** for providers and **resources** for patients

• Enable patients to ask the right questions of HCPs

Word cloud created from patient responses on learning preferences.
Further Questions or Feedback

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