USING IMPLEMENTATION SCIENCE FRAMEWORK TO GUIDE THE USE OF ELECTRONIC PATIENT-REPORTED OUTCOME (ePRO) SYMPTOM MONITORING IN ROUTINE CANCER CARE

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Background

- Electronic patient-reported outcomes (ePROs) are an evidence-based means of detecting symptoms earlier and improving patient outcomes.
- There are few examples of successful implementation in routine cancer care.

Aims

- To **identify barriers and facilitators** to implementing ePRO symptom monitoring in routine cancer care using the Consolidated Framework for Implementation Research (CFIR).
- To **match barriers with theory-informed implementation strategies** using the CFIR-Expert Recommendations for Implementation of Change (ERIC) matching tool.

Methods

- **Participants**: adult cancer patients, their caregivers, healthcare professionals involved in ePRO monitoring or processes.
- **Focus groups or individual interviews** were conducted using a semi-structured approach informed by the CFIR.
- Data was analyzed deductively using the **CFIR**.
- Barriers were matched to theory-informed implementation strategies using the **CFIR-ERIC matching tool.**

Results

Study participants (n=30):

- 22 females (73%)
- 31-70 years old (28, 94%)
- Patients (n=8)
- Carers (n=2)
- Medical oncologists (n=4)
- Nurses (n=4)
- Hospital leaders (n=6)
- Clinic administrators (n=2)
- Pharmacists (n=2)
- IT specialists (n=2)

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The CFIR facilitated ***identification of known and novel barriers and facilitators*** to implementing ePRO symptom monitoring in routine cancer care.

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Results (cont.)

- Barriers pertaining to four CFIR domains were identified, and several were novel.
- Facilitators pertaining to all CFIR domains were identified.
- Conducting consensus discussions, identifying/ preparing individual and group-level champions, and assessing readiness for change were the most frequently recommended implementation strategies.
- In **Table 1**, the barriers to '*obtaining clinician buy-in*' relating to *intervention characteristics* are shown. For these barriers, theory informed implementation strategies, facilitators described by participants ('intuitive facilitators') and overlapping implementation strategies and intuitive facilitators are shown. For more details on how this process was conducted for all barriers, please scan the QR code to access the full-text.

Future Directions:

We will use the **facilitators and theory-informed implementation strategies** to **co-design** an ePRO symptom monitoring system for people receiving immune checkpoint inhibitors.

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Table 1. Obtaining clinician buy-in- intervention characteristics

Barriers	Theory-informed implementation strategies	Intuitive facilitators	Overlapping theory-informed implementation strategies and intuitive facilitators
• Lack of evidence around impact of ePRO symptom monitoring on clinician workload • Concerns that algorithms used to triage symptom severity without clinician assessment may be unsafe	**IC- evidence strength and quality** • Conduct educational meetings • Conduct local consensus discussions • Identify and prepare champions • Inform local opinion leaders • Conduct educational outreach visits **IC- complexity** • Develop a formal implementation blueprint • Promote adaptability • Conduct cyclical small tests of change • Conduct ongoing training • Create a learning collaborative	• Clinicians are willing to accept internally and externally developed ePRO symptom monitoring systems, provided local clinicians have direct input into design/content • Conduct a pilot of ePRO symptom monitoring to ensure feasibility/ acceptability locally • Emphasize relative advantages over standard symptom monitoring: streamlining of clinic visits by improving efficiency of the clinical interview and documentation • Co-design ePRO symptom with end users	• Conduct local consensus discussions- involve clinicians in the co-design and content selection for the ePRO system • Conduct educational meetings/ outreach visits and emphasize relative advantages of ePRO symptom monitoring over standard symptom monitoring, value in objectively communicating with patients using ePROs, and potential reductions in workload. • Identify and prepare local champions- particularly those who expressed confidence in their ability to use ePRO monitoring

ePRO: electronic patient-reported outcome; IC: intervention characteristics