

Functionality and end-user acceptability of the Internet-based Computerized Patient Assessment System (iComPAsS), a mobile symptom monitoring system

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BACKGROUND: Telehealth applications enhance patient engagement in self-care, improve health behavior and outcomes, likely by fostering autonomy, competence, and relatedness in health care practices (self-determination theory). A study demonstrating the prevalence of mobile phone use and acceptability and readiness for a web-based patient-reported outcomes monitoring system among our cancer patients led us to develop the Internet-based Computerized Patient Assessment System (iComPAsS) a mobile system for symptom reporting and evaluation. **The project is funded by the ASCO Conquer Cancer Foundation.**

HYPOTHESIS: The iComPAsS is functional and practicable among physician and patient users.

METHODS: The literature was surveyed for validated symptom tools available in both English and Filipino. A focused-group discussion (two oncologists, two pain specialists and an international symptom researcher) was conducted to assess face validity and elect an instrument. Application interface and system design was developed collaboratively with information technology consultants over several iterations until beta testing revealed a satisfactory design. End-users (10 physicians, 10 patients) independently evaluated the usability of the iComPAsS using the Mobile Application Rating Scale (MARS).

RESULTS: The Edmonton Symptom Assessment Scale (ESAS) was elected due to its validity, ease of administration and prevalent use in local research and clinical settings. The iComPAsS was shown to be satisfactorily functional on beta testing. It allows patients to report symptom severity, indicate pain location on a body diagram, view prescriptions and receive notifications from their physicians. On usability testing, engagement, functionality, aesthetics and information scores revealed high and moderate acceptability among physician and patient users, respectively. A clinical trial will be conducted to determine its impact and define maintenance and scale-up issues.

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