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Pilot Study of Digital Health Technologies for Managing Low Back Pain
Digital Therapeutics Value Assessment in South Korea Yoo HY¹, Bae E¹, Lee DY¹, Choi WJ¹, Shin C^{1*}

¹ National Evidence-based healthcare Collaborating Agency(NECA), Seoul, Republic of Korea

Introduction

The Digital Therapeutic (DTx) Evaluation Toolkit was

The result showed that the 'Clinical Impact' was the highest priority criteria, while the 'DTx Product Technical Consideration' was the lowest. This is consistent with the view that it is difficult to clearly describe and verify the process of cognitive behavioral therapy interventions and the implementation of AI algorithms in technologies used for therapeutic interventions.

established by the Digital Therapeutics Alliance (DTA) to provide a common language and process for decisionmakers and DTx manufacturers to jointly use through DTx product evaluation and implementation processes. This study aims to present the operationalization and piloting of the value framework in the South Korea DTx ecosystem.

Method

This work was carried out collaboratively with a variety of stakeholders. Three sequential phases were undertaken: (1) Quick validation of the evaluation framework on the local market and implementation, (2) piloting of the evaluation criteria through applying the framework on low back pain digital technologies, (3) validation of the result on the value evaluation, where usefulness and Table 2. Validation: consultation results for itemized prioritization

	Average score
Clinical Impact	4.75
Product Basics	4.25
Product Usability	4.25
Manufacturer Evaluation	3.75
Patient-Facing Technical Considerations	3.625
Patient Centricity	3.625
Product Technical Consideration	3.25
Product Authorization and Distribution	3.25

* Framework's itemized importance rating is out of 5, based on the average of 8 experts' scores.

implementation aspects of the framework were assessed.

Table 1. Procedures for Digital Therapeutic Device (DTx) Valuation (DTx Value Assessment Toolkit)



* DTx Value Assessment Dossier: DTx Product Evaluation : Clinical Impact & Intended Use (2022) Table3. DigitalTherapeuticDeviceFrameworkItemizedAssessmentScoreResults(DigitalTherapyDeviceforChronicLowBackPain)

	Product Basics	Clinical Impact	Product Authorization and Distribution	Patient-Facing Technical Considerations
SCORE	4.4	4.4	3.8	3.8
	Product Usability	Patient Centricity	Product Technical Considerations	Manufacturer Evaluation
SCORE	4.2	4	3	3.4

* The valuation of digital therapeutic devices was subsequently weighted by 11 experts after consultation

Conclusion



The advisory board of Digital therapeutics conducted the framework's operationalization.

They highlighted the need to improve ambiguous distinct among criteria, and the potential for added complexity. The value framework was applied in a technical document on low back pain management digital technology This study has shown that different technologies can have diverse priorities for consideration, reflecting the need to consider technology-specific importance when assessing value evaluation.

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