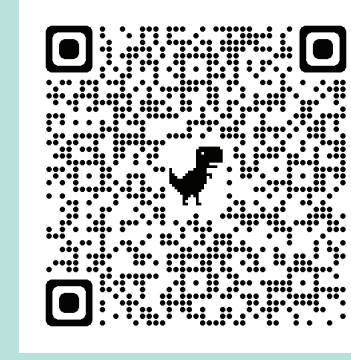




Cost Savings of a Digital Behavioral Health Therapeutic for Fibromyalgia Management

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OBJECTIVE

To perform an economic evaluation of an FDA-cleared prescription digital therapeutic (FM-ACT) for the management of fibromyalgia symptoms

FIBROMYALGIA AND TREATMENT

Fibromyalgia (FM) is a chronic syndrome affecting up to 6.4% of the US population.¹

Patients suffer from widespread pain, multiple symptoms, and co-morbid conditions.

Most patients do not have access to behavioral health interventions such as cognitive behavioral therapy (CBT), which is a recommended treatment in FM guidelines with Level 1A evidence.²⁻⁵

- Annual adoption rate of CBT in FM is only 4.5%⁶
- Limiting factors: lack of providers, high costs, and geographic barriers

Uncontrolled FM drives high symptom burden and healthcare over-utilization and FM patients have 3X higher healthcare costs than the average patient.⁷

A digital behavioral intervention delivered via smartphone can improve access to care, which may in turn, lower healthcare utilization costs.

DIGITAL THERAPEUTIC DEVICE (FM-ACT)

FM-ACT is an FDA cleared, Class II prescription digital therapeutic that provides self-guided Acceptance and Commitment Therapy (ACT), a form of CBT, for treating FM symptoms.

ACT has been empirically supported for managing chronic pain, including FM.^{8,9} It includes training in acceptance and mindfulness skills for symptoms, together with motivation and behavior change methods to improve physical and emotional functioning and increase quality of life.

Through the 3-month treatment program and later maintenance period, patients learn and practice core ACT skills related to openness, cognitive defusion, attention management, perspective-taking, values clarification, and values-based committed action.

The program also includes other CBT-based interventions for chronic pain, including education and paced daily activities/exercise.

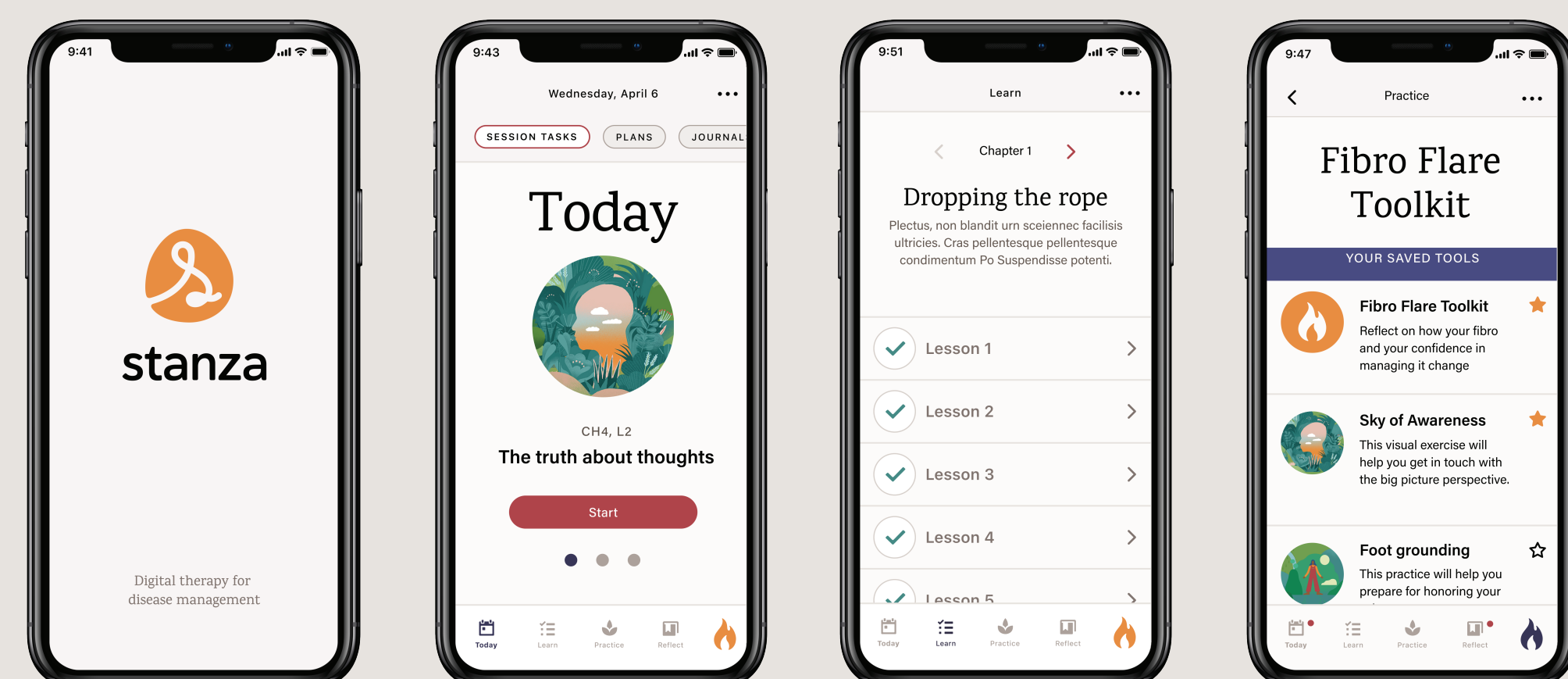


Figure 1. FM-ACT digital therapeutic application (Stanza®, Swing Therapeutics, Inc., San Francisco, CA, USA).

MODELING OF COSTS

Step 1. Claims-based, annual total per person healthcare utilization costs for FM and matched non-FM patients were extrapolated from literature³ and adjusted to 2023 USD (out-of-pocket costs excluded) to:

- establish the baseline for FM care costs
- assess the difference in economic burden between FM and non-FM patients

Step 2. A multivariate cost-effectiveness model was developed to correlate costs (healthcare utilization and lost productivity) with FM severity (measured by the total score of Revised Fibromyalgia Impact Questionnaire, FIQ-R) based on interpolation and fitting of published data.¹⁰

Step 3. The developed model was applied to calculate the average annual cost reduction with the implementation of FM-ACT treatment with following inputs: 1) annual total spending per FM patient from the baseline analysis; and 2) published FIQ-R improvement data from a real-world clinical trial on FM-ACT.¹¹

RESULTS

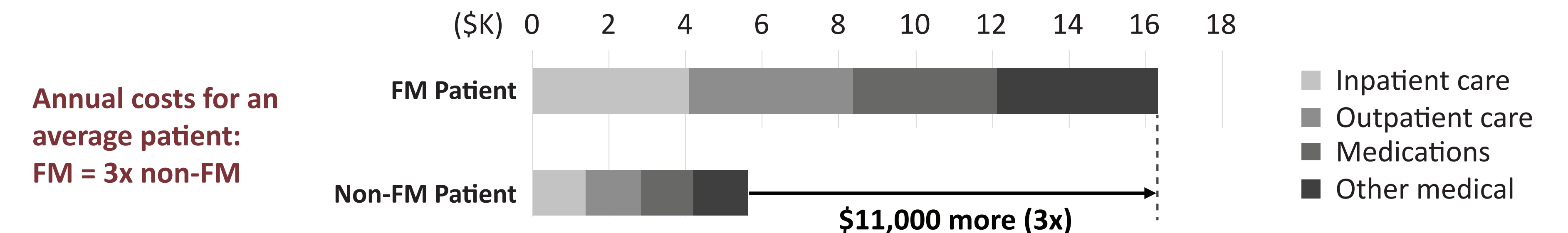


Figure 1. Annual mean healthcare utilization costs per average FM or non-FM patient.

30% annual savings per patient on healthcare utilization with FM-ACT

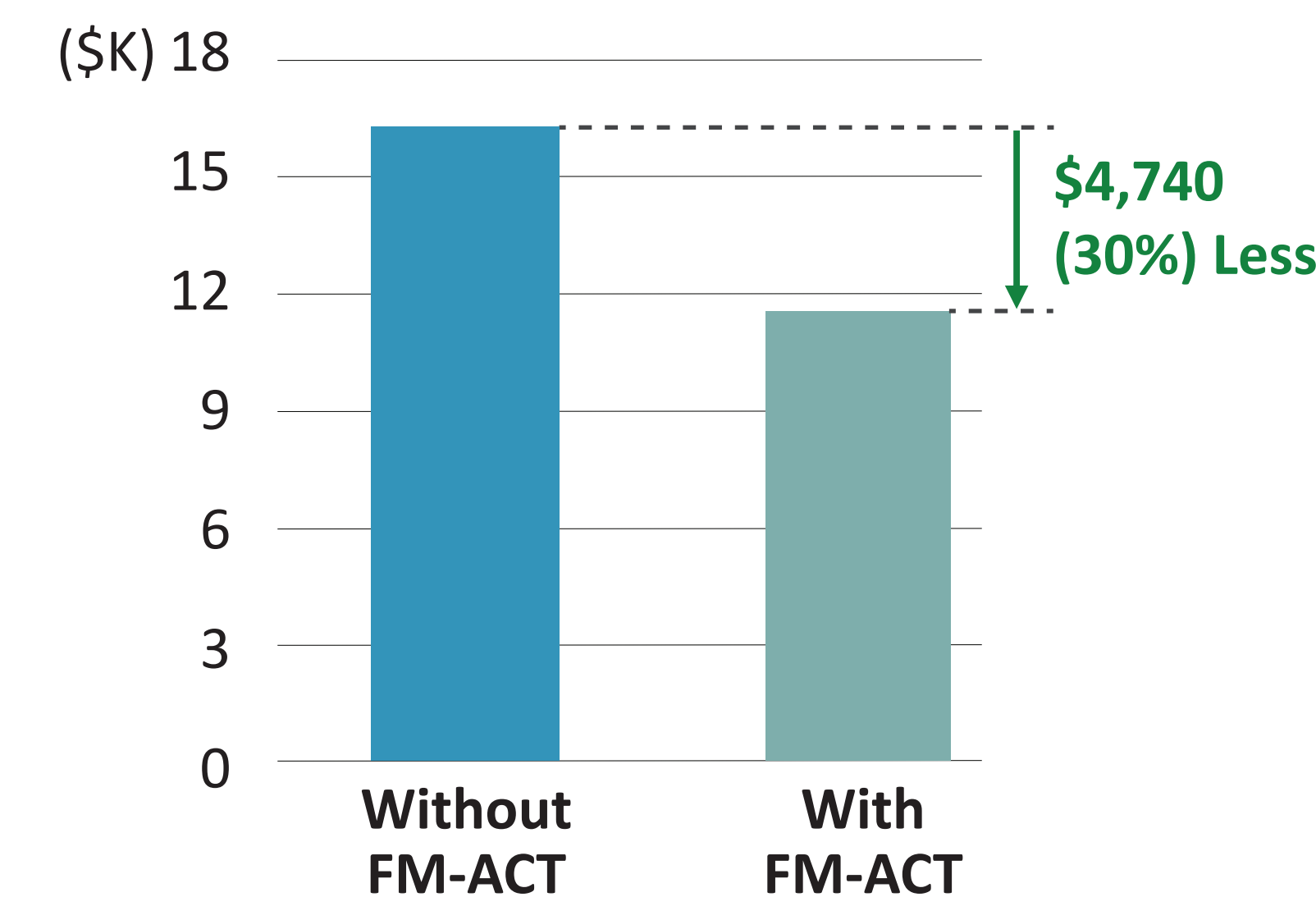


Figure 2. Annual mean healthcare utilization costs per average patient with or without FM-ACT treatment.

42% annual savings per patient on employee absenteeism with FM-ACT

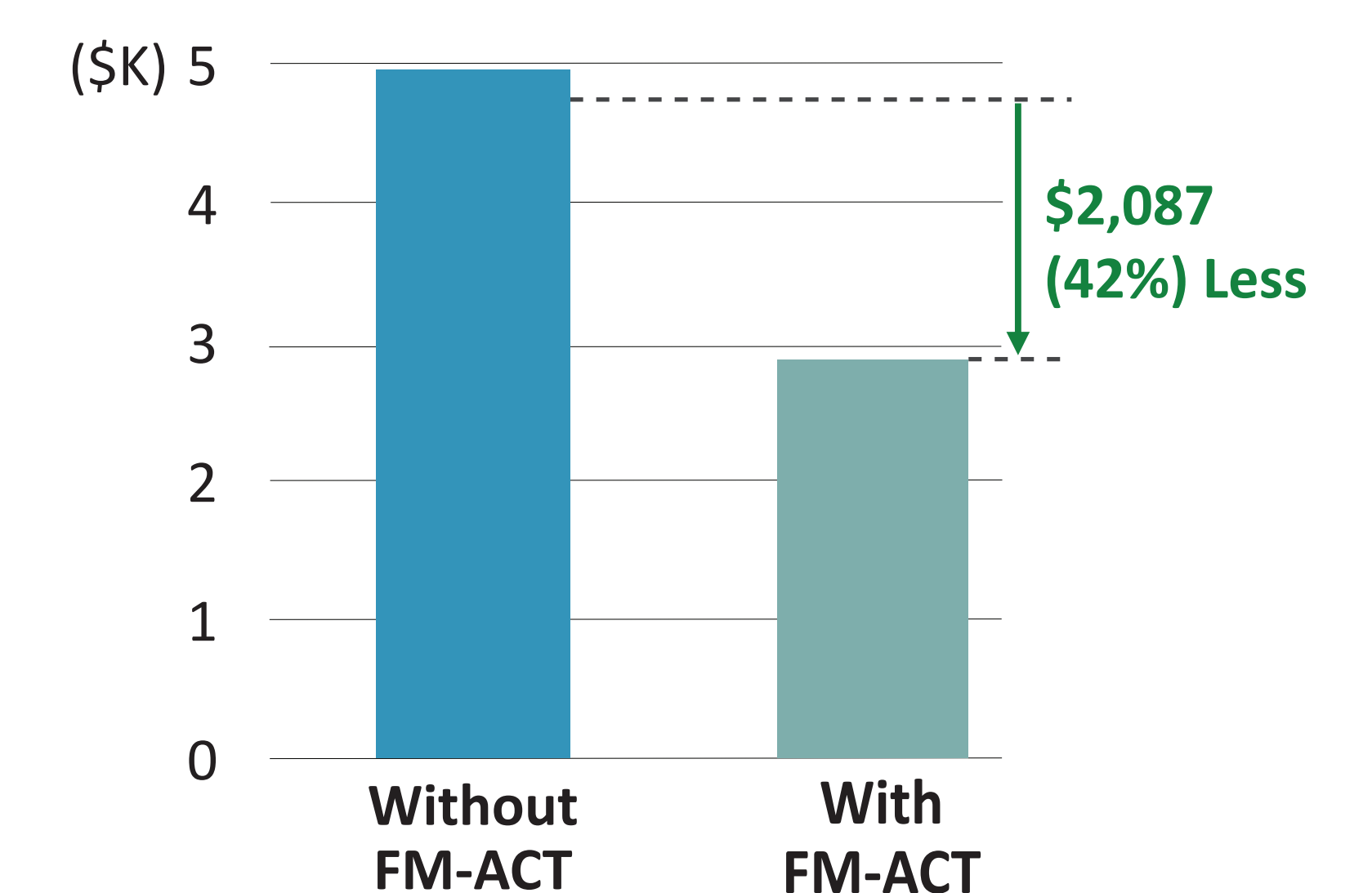


Figure 3. Annual mean lost productivity costs per average patient with or without FM-ACT treatment.

CONCLUSION

FM-ACT produced significant cost savings related to reduced healthcare utilization and work absenteeism in individuals with FM.

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