

## MEDICAL POLICY – 13.01.500

# Prescription Digital Therapeutics

BCBSA Ref. Policy: 3.03.02


Effective Date: Apr. 1, 2026  
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Replaces: N/A

RELATED MEDICAL POLICIES:

- 3.03.01 Prescription Digital Health Diagnostic Aid for Autism Spectrum Disorder
- 3.03.03 Prescription Digital Therapeutics for Attention Deficit/Hyperactivity Disorder
- 5.01.643 Prescription Digital Therapeutics for Substance Use Disorder
- 10.01.523 Preventive Care

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[RELATED INFORMATION](#) | [EVIDENCE REVIEW](#) | [REFERENCES](#) | [HISTORY](#)

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## Introduction

Prescription digital therapeutics (PDTs) are software applications that are prescribed by a licensed healthcare practitioner who is legally authorized to prescribe medications and devices in the states in which they practice. They are used on mobile devices such as a mobile phone, tablet, smartwatch, or laptop computer. The goal of prescription digital therapeutics is to evaluate, diagnose, manage symptoms, or treat an illness, injury, or disease. Other types of software applications are used for general wellness and do not require a prescription by a health care practitioner. These are not reviewed in this policy. This policy describes when prescription digital therapeutics may be considered medically necessary.

**Note:** The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

## Policy Coverage Criteria

Service	Medical Necessity
<p><b>Prescription digital therapeutics</b></p>	<p><b>Prescription digital therapeutics are considered medically necessary when ALL of the following criteria in A and B have been met:</b></p> <p><b>A. Criteria to evaluate the prescription digital therapeutic:</b></p> <ul style="list-style-type: none"> <li>○ The prescription digital therapeutic has been approved by the US Food and Drug Administration (FDA);</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ There is credible scientific evidence* which permits reasonable conclusions regarding the impact of the prescription digital therapeutic on health outcomes;</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ The prescription digital therapeutic has been proven to improve the net health outcome or is considered as beneficial as another established alternative. (See <a href="#">Related Policies</a>)</li> </ul> <p><b>AND</b></p> <p><b>B. Criteria to evaluate the appropriateness of the prescription digital therapeutic for the individual:</b></p> <ul style="list-style-type: none"> <li>○ The prescription digital therapeutic requires a prescription by a licensed healthcare practitioner;</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ There is documentation supporting that the prescription digital therapeutic was ordered for a covered purpose such as preventing, evaluating, diagnosing, or treating an illness, injury or disease or its symptoms and in accordance with generally accepted standards of medical practice**;</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>○ The requested prescription digital therapeutic is not primarily for the convenience of the individual, physician, or health care provider</li> </ul> <p><b>*Note:</b> Credible scientific evidence means well-designed, well conducted investigations published in peer-reviewed journals that demonstrate the technology can measure or alter physiological or psychological changes related to a disease, injury, illness, or condition and that these changes positively affect health outcomes for an extended period of time.</p>



Service	Medical Necessity
	<p><b>**Note:</b> Generally accepted standards of medical practice mean standards that are based on reliable scientific evidence published in peer reviewed medical literature generally recognized by the relevant medical community, physician specialty society recommendations, and the views of physicians practicing in relevant clinical areas and any other relevant factors.</p>

Service	Investigational
<p><b>Prescription digital therapeutics</b></p>	<p><b>Prescription digital therapeutics are considered investigational when ALL of the above criteria are not met.</b></p> <p><b>FDA approved prescription digital therapeutics that are considered investigational include, but are not limited to, the following: (this list may not be all inclusive)</b></p> <ul style="list-style-type: none"> <li>• BlueStarRx System</li> <li>• Canvas Dx autism diagnosis aid (See <a href="#">Related Policies</a>)</li> <li>• CT-132</li> <li>• CureSight CS 100 System</li> <li>• DaylightRx</li> <li>• EndeavorRx (See <a href="#">Related Policies</a>)</li> <li>• EpiMonitor</li> <li>• HaloAF Detection System</li> <li>• Insulia Diabetes Management Companion</li> <li>• Ieva Pelvic Digital Health System</li> <li>• Luminopia One</li> <li>• MamaLift Plus</li> <li>• MindMotion GO</li> <li>• My Dose Coach</li> <li>• NightWare (See <a href="#">Related Policies</a>)</li> <li>• Rejoyn</li> <li>• RelieVRx</li> <li>• ReSet (See <a href="#">Related Policies</a>)</li> <li>• ReSet-O (See <a href="#">Related Policies</a>)</li> <li>• RevitalVision</li> <li>• SleepioRX</li> </ul>



## Coding

**Note:** Please see 10.01.523 Preventive Care for FDA approved or cleared mobile apps related to contraception and birth control that are prescribed by a health care provider.

Professional services related to managing these devices are considered investigational when the device itself does not meet the medical necessity criteria of the policy

Code	Description
<b>CPT</b>	
0687T	Treatment of amblyopia using an online digital program; device supply, educational set-up, and initial session (use to report: RevitalVision)
0688T	Treatment of amblyopia using an online digital program; assessment of patient performance and program data by physician or other qualified health care professional, with report, per calendar month (use to report: RevitalVision)
0704T	Remote treatment of amblyopia using an eye tracking device; device supply with initial set-up and patient education on use of equipment (use to report: CureSight CS 100)
0705T	Remote treatment of amblyopia using an eye tracking device; surveillance center technical support including data transmission with analysis, with a minimum of 18 training hours, each 30 days (use to report: CureSight CS 100)
0706T	Remote treatment of amblyopia using an eye tracking device; interpretation and report by physician or other qualified health care professional, per calendar month (use to report: CureSight CS 100)
0740T	Remote autonomous algorithm-based recommendation system for insulin dose calculation and titration; initial set-up and patient
0741T	Remote autonomous algorithm-based recommendation system for insulin dose calculation and titration; provision of software, data collection, transmission, and storage, each 30 days
99199	Unlisted special service, procedure or report
<b>HCPCS</b>	
A9291	Prescription digital cognitive and/or behavioral therapy, FDA-cleared, per course of treatment (use to report: ReSet and ReSet-O)
A9292	Prescription digital visual therapy, software-only, FDA cleared, per course of treatment (use to report: Luminopia)
A9294	Prescription digital cognitive and/or behavioral therapy, biofeedback, FDA cleared, per course of treatment (new code effective 04/01/26)



Code	Description
A9999	Miscellaneous DME supply or accessory, not otherwise specified
E1399	Durable medical equipment, miscellaneous
E1905	Virtual reality cognitive behavioral therapy device (CBT), including pre-programmed therapy software (use to report: RelieVRx)
G0552	Supply of digital mental health treatment device and initial education and onboarding, per course of treatment that augments a behavioral therapy plan
G0553	First 20 minutes of monthly treatment management services directly related to the patient's therapeutic use of the digital mental health treatment (dmht) device that augments a behavioral therapy plan, physician/other qualified health care professional time reviewing information related to the use of the dmht device, including patient observations and patient specific inputs in a calendar month and requiring at least one interactive communication with the patient/caregiver during the calendar
G0554	Each additional 20 minutes of monthly treatment management services directly related to the patient's therapeutic use of the digital mental health treatment (dmht) device that augments a behavioral therapy plan, physician/other qualified health care professional time reviewing data generated from the dmht device from patient observations and patient specific inputs in a calendar month and requiring at least one interactive communication with the patient/caregiver during the calendar month
S9002	Intravaginal motion sensor system, provides biofeedback for pelvic floor muscle rehabilitation device (used to report Leva Pelvic Health System)

**Note:** CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

## Related Information

### Definition of Terms

**Digital therapeutics (DTx):** Deliver therapeutic, evidenced-based interventions driven by software to treat, manage, and prevent a broad spectrum of behavioral, mental, and physical diseases and disorders.<sup>15</sup>

**Direct to consumer:** products that are sold directly to customers, commonly online via the internet, but may include products sold via television, print advertisements, a brick-and-mortar store, or other marketing venues. These products typically do not require a prescription.



**Mobile application (app):** A software application designed to run on a mobile device (off the-shelf commercial computing platform that is handheld, with or without wireless connectivity), or an internet-based software application tailored to a mobile platform but run on a server.

**Mobile platform:** Commercial off-the-shelf (COTS) computing platforms, with or without wireless connectivity, that are handheld in nature (e.g., watches, smart phones, tablet computers, or other portable computers).

**Off-the shelf:** As purchased or as commonly available without modification or customization; taken from existing stock or supplies.

**Over-the counter:** Therapeutic interventions that do not require a prescription.

**Software:** A set of instructions or programs that instruct a computing device on how to work and what to do.

## Benefit Application

Digital therapeutics that are available “over the counter” or without a prescription and professional services related to managing these devices, are generally excluded from most Plans, even if they are ordered by a licensed healthcare practitioner. Please see the individual contract Plan language for specific benefit determination.

Some health plans or employer groups may choose to cover digital therapeutics that do not meet the criteria of this policy or are excluded from coverage under the health plan benefits. Such coverage is considered to be separate from benefits available under the health plan. If coverage is requested utilizing benefits under the health plan, the criteria of this policy will apply.

## Evidence Review

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### Description

Prescription digital therapeutics are software applications that are prescribed by a licensed healthcare practitioner and used on a mobile device such as a mobile phone, tablet, smartwatch,



or laptop computer with the intent of evaluating, diagnosing, or treating an illness, injury, disease or its symptoms.

## Background

There has been an explosion of health and wellness apps in the last decade, but many of these apps do little more than track activities such as sleep or exercise, calculate calories eaten, or monitor heart rate or weight trends. Digital therapeutics, however, are different in that they are evidenced-based, software-driven interventions that are used to evaluate, diagnose, or treat a particular illness, injury, or disease or its symptoms. Currently, digital therapeutics are being used and evaluated for a plethora of medical and behavioral health conditions. Rather than just gathering data, these software applications are proposed to actually affect the treatment of individuals. Services available through digital therapeutics may complement and add value to the traditional healthcare delivery system but they also offer new challenges such as burdening physicians by having to learn new technology for many different applications and be overloaded with data that requires interpretation, increased cybersecurity risks for individuals' healthcare and personal data, and lack of acceptance among the elderly due to inexperience with digital platforms. The field of prescription digital therapeutics is rapidly evolving and with it comes many opportunities to improve access to healthcare and perhaps lower healthcare costs, but at the same time, these software applications need to be held accountable to the same levels of scientific review and oversight that are expected of traditional medical treatments.

To provide some type of framework to evaluate and review the clinical evidence, safety and efficacy of these products, the International Medical Device Regulators Forum, a consortium of medical device regulators from around the world, which is led by the FDA, distinguishes between 1) software in a medical device and 2) software as a medical device (SaMD). The Forum defines SaMD as "software that is intended to be used for one or more medical purposes that perform those purposes without being part of a hardware medical device".<sup>30</sup>

FDA's Center for Devices and Radiological Health has taken a risk-based approach to regulating SaMD. Medical software that "supports administrative functions, encourages a healthy lifestyle, serves as electronic individual records, assists in displaying or storing data, or provides limited clinical decision support, is no longer considered to be and regulated as a medical device".<sup>47</sup>

Regulatory review focuses on mobile medical apps that present a higher risk to individuals.

- The FDA is not enforcing compliance for lower risk mobile apps such as those that address general wellness.



- The FDA is not addressing technologies that receive, transmit, store, or display data from medical devices.

The agency has launched a software pre-cert pilot program for SaMD that entered its test phase in 2019. Key features of the regulatory model include the approval of manufacturers prior to evaluation of a product, which is based on a standardized "Excellence Appraisal" of an organization, and its commitment to monitor product performance after introduction to the US market. Criteria include excelling in software design, development, and validation. Companies that obtain pre-certification participate in a streamlined pre-market review of the SaMD. Pre-certified organizations might also be able to market lower-risk devices without additional review. In 2017, the FDA selected 9 companies to participate in the pilot program out of over 100 applications: Apple, Fitbit, Johnson & Johnson, Pear Therapeutics, Phosphorus, Roche, Samsung, Tidepool, and Verily.

Other organizations have initiated similar efforts to develop a framework for evaluation of the myriad digital therapeutics that are coming to market. The American Medical Association stated in their proposed guidelines for safe, effective mobile health apps, "mobile health technologies should have a high-quality clinical evidence base to support their use in order to ensure mobile health app safety and effectiveness." The proposed guidelines note some mobile apps are subject to FDA regulation, while others are not and do not undergo rigorous evaluation before deployment for general use. This raises a concern for the safety and quality of the mobile apps that are available to the public.<sup>4</sup> The American Psychiatric Association developed The App Evaluation Model which poses questions for consideration when selecting and using a particular app.<sup>5</sup> Other regulatory authorities such as the United Kingdom's National Institute for Health and Care Excellence (NICE) have also proposed standards to evaluate SaMD.<sup>45</sup>

The types of prescription digital therapeutics addressed in this policy are ones that have received FDA de novo premarket pathway, 510(k) clearance, or pre-market approval, are prescribed by a licensed healthcare practitioner, and the intent of the digital therapeutic is to evaluate, diagnose, or treat an illness.

## Prescription Digital Therapeutics

**BlueStarRx System (WellDoc, Inc.)** is a software app for use on mobile phones or personal computers for individuals 18 years of age or older who have type 1 or type 2 diabetes. It enables the user to input personal health information and captures, stores, and transmits blood glucose data. The system analyzes and reports blood glucose test results and provides coaching messages (motivational, behavioral, and educational) driven by clinical guidelines based on real-



time blood glucose values including daily medication administration, physical activity, and smart food choices. It can connect to certain glucose meters via Bluetooth (e.g., One Touch, Accu-Chek, Contour, as well as the Dexacom CGM system). The BlueStarRx includes an insulin dose calculator that allows individuals to use their prescribed insulin regimen to calculate doses of mealtime insulin for a given amount of carbohydrates and/or blood glucose value taking into consideration factors such as the insulin: carbohydrate (I:C) ratio, insulin sensitivity factor, or programmed sliding scale. The BlueStarRx also includes an Insulin Adjustment Program (IAP) which calculates appropriate long-acting basal insulin doses for titrating insulin levels based on configuration by a healthcare provider (the healthcare provider must activate and configure the IAP for individual-specific parameters). This function will then recommend the next long-acting dose based on a target blood glucose, hypoglycemia events, or other factors. Healthcare providers can view individual-generated data and dialogue with individuals through a care management portal. It is available by prescription only. (Note the BlueStar System that does not include the insulin dose calculator is available without a prescription).

**CT-132 (Click Therapeutics, Inc.)** is a prescription digital therapeutic indicated as an adjunctive treatment for the prevention of episodic migraine headaches in individuals 18 years of age or older. The software-based treatment provides cognitive behavioral therapy interventions which target pain processing delivered on a smartphone mobile app. The treatment consists of a 12-week intervention that incorporates behavioral strategies with the goal of reducing the brain's sensitivity to internal and external triggers. The app is used for 5-20 minutes per day with flexible scheduling. It is not intended as a standalone treatment. It is available by prescription only.

**CureSight CS 100 System (NovaSight, Ltd.)** is an eye-tracking-based system designed to improve visual acuity and stereoacuity using a binocular therapy to train the visual system to use both eyes simultaneously. It is designed for pediatric patients aged 4 to  $\leq 9$  years diagnosed with amblyopia for in-home use. CureSight consists of red-blue treatment glasses that are worn over full-time refractive correction (i.e., glasses), a dedicated computer with video display, and a cloud platform with real-time remote compliance monitoring. During a treatment session, the child wears the red-blue glasses while watching personally selected streaming videos (e.g., Disney, Netflix, Prime Video, Hulu, History Channel, and National Geographic) from the computer touchscreen display. The streaming video is presented in different colors for each eye and altered by the software algorithm using embedded eye-tracking and image-processing sensors by blurring the images in the center of vision of the dominant eye, while the amblyopic eye receives normal, sharp images, thereby encouraging the visual system to integrate the visual



information to have both eyes working together simultaneously. The cloud platform monitors in real-time patient compliance and progress and provides a treatment summary and progress report to the prescribing eye care provider. Treatment sessions are 90 minutes per day, 5 days a week for 16 weeks for an overall cumulative time of 120 hours. This treatment is seen as an alternative to conventional patching of the non-amblyopic eye. The CureSight Monitoring Center aids with initial installation and set-up along with providing training and technical support if needed. CureSight is available by prescription only.

**DaylightRx (Big Health, Inc.)** is an FDA cleared prescription digital therapeutic used to treat generalized anxiety disorder (GAD) for those 22 years of age or older. It addresses the symptoms of GAD using Cognitive Behavioral Therapy (CBT) techniques. It is delivered via a Daylight IOS/Android app on a smartphone or tablet. The CBT techniques addressed in the 90-day program are broken out into four modules (10-20 minutes in length) to be used daily and “consist of interactive lessons on applied relaxation to reduce tension, stimulus control to decrease worry frequency, cognitive restructuring to break through anxious thoughts, and exposure to reduce the intensity of worry.” The program also provides exercises to help individuals integrate these same skills into their daily routines. The device is available by prescription only. It is intended to be used under the supervision of a clinician. An individual’s progress may be monitored through an online dashboard.

**EndeavorRx (Akili Interactive Labs, Inc.)** is a digital, non-drug treatment delivered through an action video game on a mobile device proposed to improve attention function in children with attention-deficit hyperactivity disorder (ADHD). The treatment is a proprietary and patented technology that is purported to activate specific neural systems in the brain which play a key role in attention function. The platform algorithms automatically adjust the difficulty level in real time and between treatment sessions to challenge an individual to an optimal level of performance. The individual plays a video game on a tablet or smartphone for thirty minutes, five days per week for four weeks to improve attention and the ability to focus on multiple tasks. It is available by prescription only.

**EpiMonitor (Empatica Inc.)**-is a non-EEG physiological signal-based seizure monitoring system. It is composed of a wearable medical device worn on the wrist called EmbracePlus that is paired with a mobile software application which runs on a smartphone called EpiMonitor. The



EmbracePlus collects via sensors Electrodermal Activity (EDA) and motion data to detect patterns that may be associated with primary or secondary generalized tonic clonic seizures in patients with epilepsy or at risk of having epilepsy. This data is then analyzed by an algorithm that determines if the user is undergoing a generalized tonic-clonic seizure. If a seizure is detected, the EmbracePlus sends a message to the EpiMonitor via Bluetooth through the Empatica Cloud with a voice call or text message to a designated caregiver. Besides initiating alerts, the EpiMonitor app receives all the raw sensor data collected by the EmbracePlus such as physiological parameters of EDA, activity during sleep, and peripheral skin temperature and transmits this data to the Empatica Cloud where it is stored and made available to the prescribing health care provider. It is available by prescription only for adults and children 6 and older.

**Halo AF Detection System (Heart Beam)** monitors pulse rhythms for the detection of atrial fibrillation via a compatible Samsung smartwatch worn at night while the user is resting or on demand during the day. The software for this device is based on an algorithm which filters and detects irregular pulse rhythms that may be suggestive of atrial fibrillation from photoplethysmography (PPG) data. The PPG signals recorded by the smartwatch are then analyzed by the Heart Beam's Halo + Home Monitoring System tablet when connected to WIFI. When a signal is suggestive of AF, the rhythm is flagged for physician review through a cloud-based portal. It is available by prescription only.

**Insulia Diabetes Management Companion (Voluntis)** is available via a mobile app or web portal and recommends basal insulin doses for adults with type 2 diabetes based on the treatment plan created by an individual's healthcare provider. The program considers the individual's profile entered, blood glucose checks, and any entered hypoglycemic events and recommends a tailored dose in real-time. Dose explanations for every recommended dose are available detailing how the calculation was made. Educational coaching messages may be given, and physicians can remotely monitor an individual's progress and adjust their treatment plan as needed. It is available by prescription only.

**leva Pelvic Digital Health System (Axena Health)** is a battery powered, intravaginally used wand device with motion sensors that facilitates pelvic floor exercise training to strengthen pelvic floor muscles for the treatment of stress, mixed, and mild to moderate urgency urinary incontinence in women, including overactive bladder. It may be used repeatedly by a single



individual. The device interacts with the user via a smart phone app and Bluetooth technology enabling the user to visualize their exercise performance to help the individual target the muscles used to help maintain continence. The app provides programmed coaching sessions to optimize pelvic floor muscle training. The individuals perform the exercises while standing twice a day for 2.5-minute sessions for up to 12 weeks. These sessions can be tracked, reviewed, and shared with the prescribing healthcare professional. It is available by prescription only.

**Luminopia One (Luminopia, Inc)** is a software-only digital therapeutic used with a compatible, commercially available virtual reality headset (Head-Mounted Display) (Samsung Gear HMD). Luminopia One is indicated for improvement in visual acuity in amblyopia patients, aged 4 to 7 years, associated with anisometropia and/or mild strabismus. Luminopia One is to be used as an adjunct to full-time refractive correction, such as glasses, which should be worn under the virtual reality headset during Luminopia One therapy. Treatment is provided through algorithmic modifications to over 700 hours of popular tv shows and movies that can be selected to encourage use of the amblyopic eye. The selected video exhibits a modified version of the original through each eye to rebalance the visual input to the eyes and encourage the weaker eye usage. Selected videos are to be watched for one hour per day, six days per week for a total of 12 weeks. An online Patient Portal is also available for a caregiver to select/block videos and monitor a patient's compliance and progress with the prescribed treatment. It is prescribed by a trained eye-care professional and is to be used in the home.

**MamaLift Plus (Curio Digital Therapeutics Inc.)**-is a digital therapeutic designed to treat symptoms of postpartum depression through software on a mobile application such as a smartphone or tablet that delivers therapeutic components of Cognitive Behavioral Therapy (CBT). The content is delivered via eight self-guided and interactive treatment modules that are to be used daily over an eight-to-nine-week period at the rate of one module per week. MamaLift Plus includes a daily tracker where self-reports of sleep, energy level, activity, and mood can be tracked. It also includes a clinician dashboard where a summary of the patient's usage and progress can be monitored by the prescribing healthcare provider. It is to be used as an adjunct to clinician-managed outpatient care to treat mild to moderate postpartum depression. It is not intended to be used as a stand-alone therapy or for patients with serious mental illness, psychosis, or thoughts of harming themselves or others. It is available by prescription only for individuals 22 years of age and older.



**MindMotionGO (MindMaze)** is a telerehabilitation program used in stroke recovery or brain injury that uses video games (software used in combination with the Microsoft Kinect v2 and Leap Motion controller) designed by neuroscientists to promote certain therapeutic movements to aid in the restoration of motor function to maximize an individual's recovery potential. Therapists create a customized training program that can be used both in clinic and at home. The therapist can continue to follow the individual via videoconferencing or in-person as well as monitor their progress remotely from their personalized dashboard. The MindMotion GO tracks an individual's movements using motion-tracking cameras. Wi-Fi is needed for home use. Currently, it is available through Johns Hopkins and Mount Sinai Abilities Research Centre in the US and abroad at centers in the U.K. It is available by prescription only.

**My Dose Coach (Sanofi, Inc.)** Basal Titration is an app designed for adult individuals with type 2 diabetes who have been prescribed and are taking a once-daily long-acting basal insulin by their healthcare provider. It is used as an aid to track fasting blood glucose levels and adjust/calculate long-acting basal insulin doses based on a prescribing healthcare provider's creation of an individualized dose plan. It is available by prescription only. (Note: There is also a My Dose Coach Maintenance that is designed to enable individuals to log their insulin, non-insulin medication use, and blood glucose measurements to provide dosing and measurement reminders. When it is used with supported accessory wireless devices, it can receive values and be used as an aid to track blood glucose and diabetes medication manually in the app or with a connected Bluetooth device). It is available by prescription only.

**NightWare (NightWare, Inc.)** is a therapeutic platform using a proprietary AppleWatch application that helps people who suffer from traumatic nightmares sleep more restfully. The app learns the wearer's sleep patterns and customizes a treatment to the individual. The app monitors the wearer's heart rate and movement while sleeping and arouses the wearer with a vibration alert when a stress threshold is reached so as not to awaken the individual. Users wear the watch only while sleeping and not during the day. It is available by prescription only.

**Rejoyn (Otsuka America Pharmaceutical Inc.)**-is a digital therapeutic smartphone application that delivers a proprietary interactive cognitive-emotional and behavioral therapy to patients with Major Depressive Disorder (MDD) aged 22 years and older who are on anti-depressant medication. It is intended as an adjunct to clinician-managed outpatient care for adult patients to reduce MDD symptoms. The components include Emotional Faces Memory Task (EFMT)



exercises, and cognitive behavioral therapy (CBT)-based lessons to help apply therapeutic skills and short message service (SMS) text messaging to reinforce CBT-based lesson content and to provide encouragement in using the app. The content is to be used over six weeks and may be followed by a four-week extension where the content will be accessible, but no new content or exercises are provided. It is not intended to be a stand-alone therapy or as a substitution for the patient's clinician prescribed medications.. There is no physician portal with this device and as such, there is no monitoring or alerts sent to the prescribing healthcare provider. It is available by prescription only.

**RelieVRx (formerly EaseVRx) (AppliedVR, Inc.)** is an immersive in home-use virtual reality system designed to provide adjunctive pain relief treatment for chronic low back pain based on cognitive behavioral therapy (CBT) skills for individuals aged 18 and older. It consists of an eight-week curriculum of pain management techniques such as body awareness, pain distraction, mindfulness-based relaxation, diaphragmatic breathing biofeedback training, pain neuroscience education, and behavior modification. The daily virtual reality sessions average seven minutes in length. It is available by prescription only and the device is returned once the curriculum has been completed.

**RevitalVision (Talshir Medical Technologies LTD)**-is described as a perceptual learning, vision training software program used in the home setting for individuals 9 years of age or older for the treatment of amblyopia. Through a series of 20 to 40 interactive computerized training sessions, the device displays a series of linear images shown in both vertical and horizontal planes on a video imaging screen that is designed to identify and correct visual dysfunction from reduced visual acuity by re-training the eye to use its most optimal visual response. Training is done with the dominant eye blurred with a semi-transparent cover, but with the eye remaining open. Individualized algorithms analyze the user's performance and adjust training session tasks to become more difficult resulting in an improvement in visual acuity. The device pre-programs user-specific series of visual stimuli tasks (described as Gabor patches) whereby the user is asked to identify various objects on the video screen. Practicing these repetitive tasks leads to an improvement in the user's visual performance. At the completion of the training sessions, the user's visual acuity is measured. Each training session is about 30 minutes in length, and the program is generally completed within 3 months. The program is available for the treatment of amblyopia by prescription only.



**SleepioRX (Big Health, Inc.)** is a digital therapeutic application developed for the treatment of chronic insomnia/insomnia disorder as an adjunct to usual care for individuals aged 18 and older. It delivers Cognitive Behavioral Therapy for insomnia (CBT-I) through an app on a smartphone. The app is obtained by a prescription from a healthcare provider and downloaded from the company's website. It is not available from an app store. The app provides sleep diaries, 24/7 video and audio content to help address an individual's thought patterns and behaviors that contribute to their insomnia. The Cognitive Behavioral Therapy content aims to break the cycle of negative thoughts, feelings, and behaviors that aid in the persistence of sleep problems.

## Summary of Evidence

### BlueStarRx

Note: There is no published peer-reviewed evidence for BlueStarRx with the insulin dose calculator or Insulin Adjustment Program. The pilot trial for Blue Star included below did provide for medication dosing and for that reason, it is included in this summary.

For individuals who have type 2 diabetes who receive cell phone-based diabetes management software system with web-based data analytics and therapy optimization, the evidence includes one nonblinded, randomized controlled pilot trial (Quinn et al., 2008) of N=30 individuals with type 2 diabetes with an A1c  $\geq$  7.5% diagnosed for at least 6 months and on a stable therapeutic regimen for at least 3 months, recruited from three community physician practices and followed for 3 months. The intervention group N=15 received cell phone-based software (a Bluetooth enabled One Touch Ultra blood glucose meter and a cellphone with WellDoc's proprietary software) providing real-time feedback on the individuals' blood glucose levels, incorporated treatment algorithms, and additional data when requested and needed to evaluate diabetes management. Individual data was analyzed by proprietary algorithms and computer-generated logbooks were sent to the individuals' healthcare providers with suggested treatment plans. The control group N=15 received One Touch Ultra blood glucose meters, testing strips and lancets for the duration of the trial. They sent logbooks of their blood glucose levels to their provider every two weeks until their levels stabilized. The healthcare providers followed their usual standards of care for diabetes management. All individuals received A1c levels and completed the Summary of Diabetes Self-Care Activities (SDSCA) questionnaire at the beginning and end of the study. Two subjects from each study group were noted to have dropped out of the study. The demographic characteristics between the two groups were comparable. The intervention group had a decrease in the mean A1c from 9.51% to 7.48% vs. the control group of 9.05% to



8.37%. The authors note that the experimental variance was inflated by an unusual decrease of A1c in one individual in the intervention group and when that outlier is removed, the variance is equivalent in the two groups. ( $P < 0.04$  corrected to  $\sim 0.02$ ). The intervention group had medications intensified (84.6% vs. 23.25%,  $P = 0.002$ ), inaccurate use of medications identified (53.4% vs. 0,  $P = 0.002$ ), and providers received logbooks (100% vs. 7.7%,  $P < 0.001$ ). Limitations include the following: Sample size was very small with no power analysis and some of the outcome data was not reported, lack of blinding could influence the results as the participants knew their actions and behaviors were being monitored as the intervention group received requests from the study interviewers to complete follow-up surveys, and there were some reported technical difficulties where the Bluetooth adapter did not always transmit data and had to be manually entered into the phone as it was acknowledged that actually only 5 of 15 individuals regularly used the Bluetooth mode of data entry. Longer-term follow-up is needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## CT-132

There is no published peer-reviewed evidence for CT-132 for the prevention of episodic migraine.

## CureSight CS 100 System

For children with amblyopia who received digital therapeutic treatment with CureSight, the evidence includes one prospective, multicenter RCT (Wyganski-Jaffe et al., 2022),  $n = 103$  children aged 4 to  $\leq 9$  years with anisometropic, small-angle strabismic, or mixed-mechanism amblyopia randomized 1:1 to either CureSight, a digital binocular, eye-tracking-based home treatment delivered through watching passive video streaming content ( $n = 51$ ) or eye patching of the non-amblyopic eye ( $n = 52$ ). Examiners who performed primary outcome measurements were masked to the treatment group assignments at all follow-up visits. The CureSight treatment group received home treatment for 90 minutes per day, 5 days a week for 16 weeks for a total of 120 hours. The control group participants were instructed to wear an adhesive patch over their dominant eye for 2 hours per day, 7 days per week for 16 weeks for a total of 224 hours. Outcome assessments were performed in weeks 4, 8, 12, and 16. Outcome measures were comprised of the Amblyopia Treatment Study (ATS) Diplopia assessment, a Symptom Survey (5-question ocular symptom survey from the ATS Miscellaneous Testing Procedures Manual), and the masked examiners performed distance visual acuity and stereoacuity testing



chosen based on the participants age at the time of enrollment. The primary effectiveness outcome was defined as the mean improvement from baseline in amblyopic eye visual acuity to week 16 in both study groups. The pre-specified non-inferiority margin was 1 logMAR line. Results were reported on 95 participants who had 16-week outcome data available. At baseline, the mean amblyopic eye visual acuity in the CureSight treatment group was  $0.37 \pm 0.15$  logMAR and  $0.37 \pm 0.14$  logMAR in the patching group. The mean improvement from baseline at 16 weeks was  $0.28 \pm 0.13$  logMAR in the CureSight treatment group ( $p < 0.0001$ ) and  $0.23 \pm 0.14$  logMAR in the patching group ( $p < 0.0001$ ). Thus, the study met its primary effectiveness endpoint of non-inferiority of improvement in amblyopic eye visual acuity in the CureSight treatment group compared to patching. Secondary outcome adherence to the assigned regimen of the CureSight treatment group was significantly greater than that of the patching group at 16 weeks, mean adherence of 91% vs 83% respectively, a difference of 8%, 95% CI (-4-21%); ( $p = 0.0114$ ). Secondary outcome stereoacuity improvement of 0.40 log-arcseconds ( $p < 0.0001$ ) and binocular visual acuity improvement (0.13 logMAR,  $p < 0.0001$ ) were similar in both groups and these improvements were not significantly different between the two groups. The percentage of participants with a 2-line or more improvement from baseline of amblyopic visual acuity in the treatment group was 79% (34/43) vs. 61% (30/49) in the patching group which was not statistically significant. There were no serious adverse effects reported. Limitations of the study include the following: 90% of the participants were anisometropic amblyopes thus, generalizability to strabismic and mixed amblyopia populations is limited, the method of a self-reporting compliance diary of the patching group could have led to overestimating compliance, and a larger sample size with longer term follow-up is needed to see if the improvement in amblyopic eye visual acuity is sustained as the improvement for both groups was similar until week 12 and it was not until week 16 that the CureSight treatment group continued to demonstrate a more significant improvement than the patching group. Also, all the authors have some affiliation with NovaSight, Ltd, some have financial stock options and patent interests with the study sponsor or device, which may pose a bias.

## DaylightRx

For individuals 22 years of age and older who have generalized anxiety disorder (GAD) who received digital use of the DaylightRx Cognitive Behavioral Therapy (CBT) program, the evidence includes two RCTs, one of which was an online two-arm parallel-group superiority study with a waitlist control, ( $n = 256$ ) with six-week post-intervention follow-up. Seventy percent of the participants were female, 83% were White, 39% had an undergraduate/bachelor's degree, 48 % were single/never married, and the mean age range was 30.7 years. The diagnosis of GAD was assessed by a score of  $\geq 10$  on the GAD-7 and on a digital version of the Mini-International



Neuropsychiatric Interview (MINI), version -7 for DSM-5 by a research assistant via the telephone. Participants were allowed to be on medication for anxiety, depressive symptoms, or poor sleep if they had been on a stable dose for  $\geq 4$  weeks prior to baseline. The participants could not have received CBT for anxiety in the prior 12 months. Participants were recruited online through social media and compensated in Amazon vouchers (£10) for each assessment for a total of £40 if all assessments were completed. 128 participants were given access to the Daylight digital CBT program. 128 participants did not receive any program during the study but were provided Daylight after the final follow-up assessment. Assessments were performed at baseline, week 3, week 6 and at week 10. The primary outcome was anxiety symptoms measured by the GAD-7 at 6 weeks post-intervention. Secondary outcomes included worry, depressive symptoms, sleep difficulty, and wellbeing. Remission for anxiety was considered if participants scored  $< 10$  on the GAD-7. The results of the study demonstrated that 76/128 completed all 4 modules and showed a significant reduction in the GAD-7 anxiety scores in the Daylight group compared with the waitlist control at all assessment time points. There were significant improvements for worry, depressive symptoms, sleep difficulty, and wellbeing at all assessment time points for the Daylight group compared to the waitlist control. At 6 weeks, 65/107 (61%) were likely to experience remission of anxiety compared to the waitlist control, (38/122, [31%]) (95% CI=2.21, 7.21;  $p < .001$ ). Limitations of the study include the anxiety diagnoses used for the study were self-reported. Most of the participants were White, educated, females around 30 years of age so findings may not be generalizable to a more diverse population. Longer follow-up is needed to determine the durability of the treatment effects, there was no blinding of the participants and so knowing whether or not they were receiving the DaylightRx may have biased their responses on the outcome measurement tools such as the GAD-7 and the MINI, and there was no comparator to standard CBT or other standard treatment alternatives for anxiety such as pharmacotherapy or psychotherapy.

The second RCT was the first evaluation of the Daylight CBT program for the treatment for symptoms of GAD. It was a single case design where 21 adults (20 were female, mean age of 43 years) with moderate-to-severe symptoms of GAD (score of  $\geq 10$  on the GAD-7 questionnaire and positive screening for probable GAD on a digital version of the Mini International Neuropsychiatric Interview [MINI] version-7 for the DSM-5) were randomized to one of three baseline durations of 2, 4, or 6 weeks and then received access to Daylight digital CBT. The participants completed daily ratings of anxiety and worry and weekly measures of anxiety, depressive symptoms, and sleep. The authors reported that seventy percent of the participants no longer had clinically significant symptoms of GAD, 61% no longer had significant depressive symptoms, and 40% no longer had significant sleep difficulty at post-intervention of 6 weeks. Limitations of this study were the extremely small sample size, the inability to be able to



generalize the findings to a more diverse population, longer follow-up is needed to determine the durability of the treatment effects, and there was no comparator.

## **EndeavorRx**

For children who have attention-deficit hyperactivity disorder (ADHD) who receive treatment with EndeavorRx, the evidence includes one double blind, randomized controlled trial of 348 individuals aged 8 to 12 years who received treatment with the AKL-T01 (earlier non-prescription version) video game, N= 180, compared with an inactive control digital intervention, N= 168, in children with ADHD over 4-weeks (Kollins et al., 2020). Only the study coordinator was aware of which video game each child received. The final sample was 329 individuals due to loss to follow-up, withdrawal, and invalid test scores. The study reported that scores of validated attention-measurement tools, (Test of Variables of Attention, Attention performance index [TOVA-API]) improved 47% vs 32% with the EndeavorRx than with the control inactive digital intervention. However, there were no between-group differences for secondary measures, which included the parent and clinician ratings of ADHD symptoms. The authors note that the trial is insufficient to suggest that AKL-T01 should be used as an alternative to established and recommended treatments for ADHD. Additional RCTs with more than one validated scale, and with longer-term follow-up are needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## **EpiMonitor**

There is no published peer-reviewed evidence for EpiMonitor.

## **HaloAF Detection System**

There is no published peer-reviewed evidence for Halo AF Detection System.

## **Insulia Diabetes Management Companion**

Note: There are no published studies on Insulia Diabetes Management Companion. The following summary is on its predecessor, Diabeo system, which is a class IIb CE marked device in



Europe; it does not have FDA approval. The Diabeo system was developed in partnership between Voluntis and Sanofi of France; their partnership ended in December of 2020.

For adults with Type 1 or Type 2 diabetes treated with long-acting insulin analog using the Diabeo system, the evidence reviewed here includes 3 RCTs. TeleDiab-1 (Charpentier et al, 2011) was a multicenter, open-label parallel-group, randomized control trial with 6 months follow-up, n= 180 adult participants >18 years of age with type 1 diabetes for > 1 year and on a basal-bolus insulin regimen for > 6 months, either with multiple daily injections or an insulin pump, and with HbA1c  $\geq$  8% (mean was 9.07%). The participants were randomized to three groups of equal size using a Web-based system: the control group with usual quarterly in person follow-up at 3 and 6 months, n=61 (G1), home use of a smartphone recommending insulin doses with in person quarterly visits at 3 and 6 months, n=60 (G2), or use of the smartphone with brief teleconsultations every 2 weeks but without a face-to-face visit until the end of the study at 6 months, n=59 (G3). The authors note that 10 participants who did not meet the inclusion criteria of a HbA1c  $\geq$  8% were included and were equally distributed between the 3 groups with their data being retained for analysis. At the study completion, HbA1c measurements were available for 162 participants with 7 participants lost to follow-up. The results demonstrated that the end point HbA1c at 6 months was higher in G1 (9.10%) than in G2 (8.63%) or G3 (8.41%); however, the difference between G1 and G2 was not statistically significant ( $p=0.022$ ). The difference between G1 and G3 was, however, statistically significant ( $p= 0.0019$ ). The proportion of participants reaching the target of HbA1c  $\leq$  7.5% at the end point of 6 months was 17% in G3 (10/59), 6.7% in G2 (4/60), and 1.6% in G1 (1/61). The difference between G3 and G1 was statistically significant ( $p=0.007$ ). The frequency of non-severe, symptomatic hypoglycemia episodes did not differ between groups at the end point of 6 months, nor did they increase from baseline reports. Limitations: There was unclear reporting on the use of intention to treat vs per protocol participants analysis. Larger sample sizes and longer-term follow-up are needed.

TeleDiab-2 (Franc et al., 2019) was a multicenter, randomized controlled, open-label study completed at 4 months, n=191 participants with type 2 diabetes mellitus who had inadequately controlled HbA1c between 7.5% and 10% on maximum dose oral medications and required initiation of basal insulin (BI). The mean age of the participants was 58.7 years and mean HbA1c was 8.9%. The participants were randomized into three groups: 1) standard care, n=63, 2) interactive voice response system (IVRS), n= 64, and 3) Diabeo-BI app software, n=64. A 13-month follow-up of an extension phase included n=158 participants 98.1% (52/53) from G3 continued using the Diabeo-BI app software and G2 IVRS software was discontinued, and those participants continued with standard follow-up, as in the initial control arm (G1), with face-to face visits every 3 months without telemedicine. Results demonstrated at 4 months follow-up HbA1c decreases from baseline group 2 (-1.44%) and group 3 (-1.48%) arms compared with the control arm, group 1 (-0.92%,  $p<0.002$ ). Target fasting blood glucose was reached by twice as



many individuals in the telemonitoring groups as in the control group, and insulin doses were also able to be titrated to higher levels. No severe hypoglycemia was observed in the telemonitoring groups and mild hypoglycemia frequency was similar in all groups. At the 13-month extension, the G2 and G1 had similar values of HbA1c and insulin doses. HbA1c levels were lower in G3 compared with the control arm (G1=G2), but the difference was not statistically significant (numerical values not reported). The glycemic control target (HbA1c < 7.0%) was greater in the G3 participants (30.2%) than the control arm (13.8%,  $p=0.023$ ). Basal insulin was  $0.65\pm 0.49$ ;  $0.48\pm 0.31$ ;  $0.47\pm 0.28$  U/kg/day for G3, G2, G1 respectively ( $p=0.05$  G3 vs G1). Mild hypoglycemic episodes were rare with no differences between the three groups. These findings need to be validated with a larger sample size and with longer-term follow-up.

TELESAGE (Franc et al., 2020) was a multicenter, randomized, open study. N=665 with 3 arms: 1) standard care, n=221 (control group) 2) Diabeo alone, n=231 (25.1% of participants were users n=58), and 3) Diabeo+telemonitoring by trained nurses, n=213 (37.6% of participants were users n=80) (arms 2 and 3, the intention to treat population). The mean age was 38.5 years, and the majority had type 1 diabetes (91.6%). The mean HbA1c was 9.1% and insulin was delivered either by a pump (53.0%) or multiple daily injections (47.6%). In a post hoc analysis in those who used Diabeo at least once daily, there was a significant reduction in HbA1c after 12 months follow-up: mean difference -0.41% for arm 2-arm 1 ( $p= 0.001$ ) and -0.51% for arm 3-arm 1 ( $p \leq 0.001$ ). There was even a greater reduction in HbA1c in those who used Diabeo at least twice a day (13.9% of participants, n= 32 from arm 2 and 24.4% participants, n= 52 of arm 3) -0.50% for arm 2-arm 1,  $p=0.002$  and -0.66% for arm 3-arm 1,  $p \leq 0.001$ . There were no significant differences between the three groups for the percentage of participants who reported at least one symptomatic hypoglycemia. Limitations of the study: Statistical significance of the intention to treat analyses were not reported, thus the study conclusions were reliant on the post hoc analysis. There was a considerable attrition rate of persons in the intention to treat population, 40-50% of participants in arm 2 and 20-30% of participants in arm 3 never actually used Diabeo, thus the sample size fell short of the number defined in the power analysis. These preliminary findings need to be validated with a larger sample size of actual users of the device. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## leva Pelvic Digital Health System

For women with stress or mixed, urinary incontinence (UI) who receive treatment with the leva Pelvic Digital Health System, the evidence includes one pilot, single center, prospective, open label study (Rosenblatt et al., 2019). N=23 female premenopausal participants, > 18 years of age



(mean 42 years old) with mild stress UI who performed pelvic floor muscle (PFM) exercises while standing with use of the accelerometer-based system twice daily for 6 weeks. Each training session entailed five repetitions of 15-second PFM contraction followed by 15-second relaxation over 2.5 minutes. These sessions took place in an outpatient clinic and were supervised by the same research assistant. Pelvic floor angle measurements at rest, with strain, and with PFM contraction were taken at baseline, and then weekly for 6 weeks. Each participant also answered the following validated questionnaires: Urogenital Distress Inventory (UDI-6) which measures the severity of urogenital complaints, Incontinence Impact Questionnaire (IIQ-7) which measures the impact of UI on daily activities, and Patient's Global Impression of Severity (PGI-S). At 3 and 6 weeks, the participants also completed the Patient's Global Impression of Improvement questionnaire, and at 6 weeks the participants indicated user-friendliness on a scale of 0 to 10 (easiest to impossible). Results demonstrated the pelvic floor angle at maximal effort contraction increased by 16° from 65.1° at baseline to 81.1° at 6 weeks ( $p < 0.0001$ ). The pelvic floor angle upon bearing down reduced from 48.3° at baseline to 43.7° ( $p=0.0043$ ). The mean maximum duration of continuous voluntary PFM contraction increased by 174.8 seconds from baseline to 6 weeks ( $p < 0.0001$ ). The maximum number of contractions performed within 15 seconds increased by 3.7 repetitions from enrollment to the study endpoint ( $p < 0.0001$ ). Participants also reported decreasing scores on the UDI-6, IIQ-7, and PGI-S from baseline to 6 weeks, indicating improvements in symptom severity and quality of life. Limitations: Study sample size was small, there was no comparison group, and regular interaction with a research assistant may have affected the subjective improvement reported by the participants and may not be generalizable to the same at home users. Longer follow-up is also needed to see if the reported improvements are sustainable. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Weinstein et al (2022) reported on a multicenter RCT that compared an intravaginal motion-based digital therapeutic device for pelvic floor muscle training (PFMT) (intervention group) with PFMT alone (control group) in female individuals with stress or mixed urinary incontinence (UI). N=77 with final analysis of 61 participants (29 in intervention group and 32 in control group) that showed no statistical difference in primary outcomes (scores on Urinary Distress Inventory or Patient Global Impression of Improvement). However, scores on the Pelvic Organ Prolapse and Colorectal-anal Distress Inventories and Pelvic-Floor-Impact Questionnaire did improve significantly more in the intervention group than the control group. The median number of stress UI episodes decreased more in the intervention group than in the control group. The trial was prematurely terminated due to device technical considerations. A larger powered trial is underway.



## Luminopia One

For children aged 4 to 7 years with a diagnosis of amblyopia who receive treatment with the Luminopia One digital therapeutic, the evidence includes one RCT of n=105 children 4 to 7 years of age with amblyopia. The treatment group, n=51 used the therapeutic head-mounted display one hour per day, 6 days per week with full time refractive correction for 12 weeks, Participants in the comparison group, n=54, wore refractive correction alone for 12 weeks. The primary efficacy outcome was change in amblyopic eye visual acuity (VA) from baseline at 12 weeks. In the treatment group, the software in the device modified the video content by contrasting the images presented to the fellow eye by 15% of that presented to the amblyopic eye and dichoptic masks were superimposed on the images so that both eyes were required to fully view the video content. Participants were evaluated at 4, 8, and 12 weeks for VA. Outcome assessors were masked to treatment group; however, participants and study coordinators were not masked. Participants were asked not to discuss their treatment with the examiner. Results demonstrated that at 12 weeks, amblyopic eye VA improved by 1.8 lines (95% CI, 1.4-2.3 lines; n=45) in the treatment group and by 0.8 lines (95% CI, 0/4-1.3 lines; n=45) in the comparison group. At a planned interim analysis, the difference between groups was statistically significant (1.10 lines; P= 0.0011, 96.14% CI, 0.33-1.63 lines) and the study was stopped early due to successful outcomes per the protocol. No serious adverse events were reported. Headaches in the treatment group were the most common adverse event reported and worsening VA in the amblyopic eye was the most common in the comparison group. Adherence in the treatment group was 88.2% with the therapeutic and 100% adherence in both groups with refractive correction throughout the 12-week follow-up. Limitations of the study: the authors note a large proportion of participants had undergone prior active amblyopia treatment so it is difficult to know what impact this may have had on the study results. There was missing outcome data for 15 of the 105 participants which could have biased the results of the study. There was no comparator to the standard treatment of patching, atropine, or a sham comparator. Longer follow-up is needed to determine the durability of the treatment benefit and replication of a larger sample size would be beneficial.

## MamaLift Plus

For individuals with postpartum depression (PPD) treated with the MamaLift Plus digital therapeutic, the evidence includes one pivotal double-blind RCT. N=95 participants who had recently given birth (within 3 months of enrollment) and were assessed by a licensed mental health provider as having PPD and had an EPDS score between 13-19 were randomized 2:1 to receive the MamaLift Plus digital therapeutic or n=46 participants were randomized to the sham



control and followed for 8 weeks. The control mimicked the features and functionality of the MamaLift Plus but there was no cognitive behavioral therapy content. All participants were recommended to use their “app” daily for 8 to 12 minutes per day. The app was referred to as the “SuMMER study app” for all participants to protect masking. All participants completed a healthcare usage questionnaire every 2 weeks and an EPDS assessment every 4 weeks. At the end of 8 weeks all participants completed an EPDS assessment, health care usage questionnaire, mental health treatment received questionnaire, and prescribed medication use questionnaire much as they did for their initial baseline. 11 participants (5 from the intervention group and 6 from the control group) did not provide the endpoint assessment. Results demonstrated that 86.3% (82/95) had an improvement of  $\geq 4$  points in the Edinburgh Postnatal Depression Scale (EPDS) score from baseline compared with 23.9% (11/46) ( $P < 0.0001$ ) from the sham control arm. Discussions with regulators predetermined that a EPDS score  $\geq 4$  was considered clinically meaningful and so was set as the primary efficacy endpoint. Limitations of the study include longer follow-up is needed, a greater number of participants who also completed the Hamilton Depression Rating Scale (HAMD-17) would have strengthened the study’s conclusions, Also, there was no test for blindness. Even though the sham control arm mimicked the features and functionality of the treatment intervention, one cannot be certain that the sham control arm participants did not change their behavior based on what they believed they were receiving.

## **MindMotionGO**

There is no published peer-reviewed evidence for MindMotionGO.

## **My Dose Coach**

For adults with Type 2 diabetes treated with any long-acting basal insulin using the My Dose Coach smartphone app, the evidence includes one prospective single-arm, pilot study of  $N = 158$  individuals, aged 18-75 years (mean age 51) with an HbA1c  $> 7\%$  (mean at baseline 9.6%) who used the My Dose Coach app programmed according to the individual profile suggesting optimal basal insulin titration dosing using fasting self-measured plasma glucose and hypoglycemia data with 16 weeks of follow-up. Results demonstrated in the 141 participants who completed the study a mean reduction in HbA1c of 1.97% from baseline ( $P < 0.001$ ) which was statistically significant. The predefined glycemic target of 90-130 mg/dl was achieved in 58.9% of the participants within 66 days with no severe hypoglycemia events. Limitations of the study: It was a single center study, there was no control or comparator, there was an attrition



rate of 11%, and longer-term follow-up is needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

An RCT conducted in Germany included a 12-week, multicenter, open-label, parallel study of 251 participants with type 2 diabetes with a HbA1c >7.5% and <10.0%. who were on basal insulin therapy or initiating basal insulin therapy, Participants were randomized 1:1 to n=128 the My Dose Coach intervention group who titrated their basal insulin dose using the app after a titration algorithm was entered by their treating physician and n=123 the control group who titrated their basal insulin dose according to a written titration chart from their physician. The primary outcome was the baseline-adjusted change in HbA1c at 12 weeks. The participants, the study centers, and the outcome assessors were blinded. Participants had to perform at least one fasting blood glucose daily. At the end of the 12 weeks HbA1c levels were measured again and the titration application was uninstalled from the intervention group's smartphones. 11 intervention group and 4 control group participants were lost to follow-up. Results demonstrated the median HbA1c reduction in the intervention group was -0.93% (IQR -0.4% to -1.6%) compared to -0.6% (IQR -0.1% to -1.4%) in the control group, resulting in a model-based adjusted between-group difference of -0.31% (95% CK: 0.01%-0.69%; p=0.0388) in favor of the intervention group. There was no episode of severe hypoglycemia or diabetic ketoacidosis reported in either group. There were three symptomatic episodes of hypoglycemia in the intervention group, confirmed by a glucose reading < 70 mg/dl. The affected individuals were able to treat themselves and did not require third-party assistance for recovery. Limitations of the study include longer-term follow-up is needed to determine the durability of the HbA1c is sustained over time, The study was not blinded which may introduce bias among the participants, the assessors, and the study centers knowing the allocation of the randomization. The study design reflected the German healthcare system so the findings may not be generalizable to other countries with different healthcare systems, Also, the participating centers were specialized diabetes practices who have expertise in insulin titration and so the findings may not be generalizable to general family practice or internist settings, and lastly the study was industry sponsored with some of the authors reporting support for travel and scientific meetings from the sponsor as well as Advisory Board member fees for some of the authors as well as honoraria for lectures from the sponsor which may have posed a bias for the authors.

## NightWare

For individuals with nightmare disorder or PTSD-associated nightmares who receive NightWare, the evidence includes a single trial. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The single pivotal trial did not meet the primary



efficacy endpoint. This trial failed to achieve recruitment goals and was likely underpowered. A well-designed blinded randomized controlled study with a clear design for testing a pre-specified hypothesis is needed. Given these limitations, the benefit of NightWare in individuals with nightmare disorder and post-traumatic stress disorder-associated nightmares is uncertain. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## **Rejoyn (also known as CT-152)**

For adults with Major Depressive Disorder who have had an inadequate response to current antidepressant medication monotherapy, the evidence includes an RCT. 386 participants were randomly assigned to the CT-152 intervention group, n=194 or the sham control group, n=192. The intervention group received a cognitive-emotional and behavioral therapeutic intervention delivered via a smartphone app. The sham control group received a sham app using Shapes Memory Task (SMT), an emotionally neutral working memory task matched for time and attention to Emotional Faces Memory Task (EFMT) which was used by the CT-152 intervention group. Participants and sites were blinded to the treatment assignment as well as the independent raters for the Montgomery-Åsberg Depression Rating Scale (MADRS) assessments. 29 participants discontinued the trial from the intervention group and 28 discontinued from the sham group. A total of 177 participants in each group were analyzed for efficacy in the modified Intention to Treat analysis. The authors described the CT-152 (Rejoyn) as “cognitive emotional training concurrent with standardized cognitive-behavioral therapy, designed to target neural circuits.” The participants in both groups also received text messages determined algorithmically from a pre-specified in app library to reinforce lessons and encourage engagement. The primary outcome was MADRS score change from baseline to week 6 of follow-up. The results demonstrated that the MADRS score changed -9.03 in the CT-152 group and -7.25 in the sham group (difference, -1.78; P=0.0568). The between-group difference in 6-week MADRS change from baseline was -2.12 (P=0.0211), favoring the CT-152 intervention. Limitations of the study include most of the participants were in their early 40s, female, and white. Thus, it is unknown if the results would be the same for a younger or older population or for males. Longer follow-up is needed to see if there is a sustained effect of the digital therapeutic once it has been discontinued. This was an industry sponsored trial, and the authors are employed by the manufacturer of the digital therapeutic which may pose a bias.



## RelieVRx (formerly known as EaseVRx)

For adults with chronic low back pain treated with EaseVRx virtual reality (VR) system, the evidence includes one double-blind RCT (Garcia, et al, 2021). N=179 individuals (76.5% female, 90.5% Caucasian, 91.1% have some college education, mean age 51.5 years, average pain intensity 5/10, 67% back pain duration > 5 years, 76.5% resided in highly urban or metropolitan area) chosen from a national online convenience sample (obtained through internet advertisements). The participants had self-reported low back pain with duration of six months or more with average pain intensity of 4 or >/10 and were randomized 1:1 to a 56-day EaseVRx program, or a Sham VR (2D nature content delivered in a VR headset). The primary outcome was the effects of EaseVRx versus the Sham VR representing change in average pain intensity and pain-related interference with activity, stress, mood, and sleep from baseline to end of treatment at 56 days. Change was measured using the Defense and Veterans Pain Rating Scale (DVPRS), where 0= no pain and 10= as bad as it can be, and the DVPRS interference scale (DVPRS-II), where 0= does not interfere and 10= completely interferes. Twice-weekly surveys were obtained with a final survey at treatment completion. Results demonstrated user satisfaction ratings were higher for EaseVRx versus Sham VR ( $p < 0.001$ ). EaseVRx was superior to Sham VR for all primary outcomes with greater reductions in average pain intensity and pain-related interferences with activity, mood, and stress (highest  $p$  value=0.009). Between group difference Cohen  $d$  effect sizes ranged from 0.40-0.49, indicating superiority was moderately clinically meaningful. From baseline to end of treatment Cohen  $d$  effect sizes ranged from 1.117 to 1.3, indicating moderate to substantial clinical importance for reduced pain intensity and pain-related interference with activity, mood, and stress. Between-group comparisons for physical function and sleep disturbance demonstrated superiority for the EaseVRx versus the Sham VR ( $p=0.022$  and  $0.012$ , respectively). However, pain catastrophizing, pain self-efficacy, pain acceptance, and prescription opioid use (morphine milligram equivalent) did not reach statistical significance for either group. Use of over-the-counter analgesic use was reduced for EaseVRx ( $p < 0.01$ ) but not for Sham VR. A three-month follow-up study by the same authors (Garcia, et al, 2022) analyzed data for  $n=188$  participants who were surveyed at 1, 2, and 3 months post the original 56- day end of treatment. The  $n=188$  included all participants with baseline data from the previous study, 168 of which completed the 56-day treatment and remained blinded during this follow-up. Of those 168 participants, at least 20 did not complete their surveys at months 1, 2, and 3 but were still included in the dataset analysis. The researchers were unblinded during this 3-month follow-up. The results demonstrated that the EaseVRx had lower pain intensity, lower pain-interference with activity, sleep, and stress than the Sham VR, which was maintained to month 3 (effect sizes,  $d_{rm} = 0.56-0.88$ ), as well as higher physical function. Pain-interference with mood did not survive multiplicity correction at 3 months. There was also not a significant difference between EaseVRx and Sham VR for sleep disturbance in the post-treatment 3 months. (Of note, a 6-month follow-



up is ongoing but is currently not published). Limitations of the study: The findings need to be validated in a larger sample size with longer follow-up to determine the durability of any treatment effects. Because all data was self-reported, it would be beneficial to have diagnoses confirmed and specific analgesic prescription information provided to effectively measure a change in opioid use. The study sample was predominantly urban, white, females and so may not be generalizable to the general population. The study was performed during COVID-19 when most people were staying home and isolating. It would be helpful to know if the findings are reproducible in a more realistic environment. Lastly, there is a potential for bias as the study authors were all affiliated with AppliedVR, Inc. The 6-month follow-up, now published, demonstrated that the average pain intensity was lower in the EaseVRx group than in the sham group. Both treatment groups had lower average pain intensity from pretreatment to 6 months posttreatment ( $P < 0.001$ ). At end-of-treatment the EaseVRx group had lower pain intensity relative to the sham VR group which was maintained at 6 months. The mean percentage change was -31.3% (moderate clinical importance) for the EaseVRx group and -15.9% (minimal clinical importance) for the sham VR group. 52.1% of EaseVRx group and 25.0% of sham VR group achieved the moderate clinical meaningfulness threshold ( $\geq 30\%$ ) and 38% vs. 13.2% respectively, achieved the substantial clinical meaningfulness threshold of ( $\geq 50\%$ ). The authors conclude that the treatment effects of the EaseVRx were durable to 6 months post-treatment with greater improvement of EaseVRx compared to sham VR for reduction in pain intensity and pain-related interference (activity, stress, and sleep). However, between group differences for physical function and sleep disturbance at 6 months were statistically significant but not clinically meaningful. Limitations of the study remain the same as previously noted related to the inability to generalize the findings to the general population; the lack of objective data related to the participants diagnosis, medication use, or other pain treatments that might have been used during the study. Also, at the end of the study, 73% of the participants guessed their treatment group allocation indicating the blinding failed, and lastly as previously noted the study was industry sponsored, and all the authors have some affiliation with AppliedVR. A 24-month follow-up study of the Garcia RCT was published by Maddox (2023) as a letter to the editor describing the results from 127 of the 168 participants who completed the end-of-treatment surveys, (76%;  $n=68$  of 84 [81%]) in the RelieVRx intervention group, and  $n=59$  of 84 (70%) in the Sham control group. From baseline to 24 months post treatment, the pain intensity reduction was 24% for the RelieVRx group and 12% for the Sham control group. The pain interference reduction was 45% for the RelieVRx group and 21% for the Sham control group, demonstrating that the RelieVRx continued to show durable improvements at 24 months post treatment relative to the Sham control and relative to baseline. The percentages of participants with clinically meaningful ( $\geq 30\%$ ) reductions were a minimum of 65% of the RelieVRx group vs. a maximum of 49% in the Sham control group in either pain intensity or pain interference or both during the 6-month to 24-month post-treatment. These results are promising. However,



the limitations remain that most of the study population were college-educated, middle-aged, white females and so a more diverse population needs to be studied. The blind test failed at the 6-month follow-up and so the participants had guessed which allocation group they were in which could pose a bias for how they responded after the 6-month follow-up through the 24 months post-treatment. Again, this was an industry sponsored study where most of the authors are employed or formerly employed by AppliedVR.

## RevitalVision

For individuals with amblyopia treated with RevitalVision, the evidence includes a prospective observational study, a prospective cohort study, and an RCT. A prospective study by Magdlene et al (2022) enrolled 45 subjects with unilateral or bilateral amblyopia between the ages of 8 to 48 years old with the mean age being 17.2 +/-10.2 years who had plateaued with six months of part-time occlusion therapy or refractive adaption for >16-18 weeks prior to the start of the study<sup>51</sup>. Training sessions were three per week and 9 per month for a total of 30 to 40 sessions. The dominant eye was blurred during the training sessions for unilateral amblyopia or both eyes open and uncovered for bilateral amblyopia. Baseline mean distance best corrected visual acuity was 0.54 logMAR. After treatment, the mean best corrected visual acuity improved to 0.32 logMAR, which was statistically significant ( $p < .001$ , paired t-test). Limitations of the study were the small sample size, lack of randomized treatment assignment, data for visual acuity improvement by age group was not reported, and the clinical significance of improvement in visual acuity is not clear. A prospective study by Yalcin and Balci (2014) enrolled 99 subjects aged 9-50 years, 53 in the perceptual vision therapy group (RevitalVision) and 46 in the control group<sup>107</sup>. All subjects had occlusion treatment during childhood. The treatment group completed 45 training sessions lasting for 30 minutes each, three times a week, followed by an end of treatment examination. The control group underwent 30 minutes of eye patching three times a week. Instead of perceptual vision therapy, they played placebo computer games at home. All subjects were followed for four months. The results demonstrated a mean improvement of 2.6 logMAR lines in visual acuity from baseline which was statistically significant ( $p = 0.001$ ). Contrast sensitivity function improved at 1.5, 3, 6, 12, and 18 cycles per degree spatial frequencies. The control group did not show any significant change in visual acuity or contrast sensitivity function. Limitations of the study were lack of randomization of the treatment assignment. The study was not blinded in evaluation of outcomes. An RCT by Zhong et al (2022) enrolled children with limbal dermoid (LD) (N=25) (LD group) and 25 children without LD (N group) were compared regarding contrast sensitivity function (CSF) and visual acuity (VA).<sup>108</sup> The average age in both groups was 10.20 years. Eight children quit the amblyopia treatment group so 17 children with limbal dermoid (LD) postsurgical lamellar keratoplasty (LKP) diagnosed with



amblyopia were randomly assigned to two arms: 9 in the perceptual learning (PL) group, combined with patching and 8 in the control group that received patching only. The allocation details were kept sealed until all baseline assessments were completed. Follow-up was at week 1 and thereafter, monthly for 6 months. The children in the PL group underwent 30-minute daily sessions along with 2 hours of patching. The children in the patching group were prescribed 2 hours of daily patching alone. Examiners who were blinded to the treatment allocation measured VA and CSF at one, three, and six months. The primary outcome was the area under log CSF and the secondary outcome was the best corrected (VA). The results demonstrated a reduction in the LD group compared to controls. After six months of training, the difference in the changes in the AULCSF between the PL and patching groups was 0.59 (95% CI: 0.32, 0.86,  $p < 0.001$ ), and the between-group difference in VA at six months was -0.30 (95% CI: -0.46, -0.14,  $p < 0.001$ ) concluding that perceptual learning for those who have undergone lamellar keratoplasty with amblyopia could better improve CSF and visual acuity in the amblyopic eye than patching alone. Limitations of the study were the small sample size, the short-term follow-up, the interval since the keratoplasty was not reported, and the presence or absence of amblyopia prior to the keratoplasty surgery was not reported. Thus, the results may not be generalizable to individuals with typical amblyopia etiology or to those whose amblyopia has been corrected, when possible, with conventional measures.

## SleepioRx

For adults aged eighteen or older with chronic insomnia/insomnia disorder treated by SleepioRX as an adjunct to usual care, the evidence includes one systematic review, one meta-analysis, and eight randomized controlled trials (RCTs). A meta-analysis of RCTs by Soh et al (2020) included 33 RCTs studying digital chronic behavioral therapy for insomnia (dCBT-I); 8 of the included RCTs were conducted in the US with a minority of the studies using Sleepio. The average non-complete rate was 35.2%. Confounding evidence demonstrates that dCBT-I loses effectiveness with increasing number of sessions. Sleepio was not evaluated in the only 3 studies reporting one year follow up. Limitations are risk bias by unblinded subjects, subjective self-reported outcomes, high attrition, minority of studies assessing Sleepio, and no long-term data. A systematic review and meta-analysis by Hwang et al (2025) included 29 RCTs and 6 RCTs were in the US. The 9,475 subjects were 73% female, with an average dropout rate of 41%. This review reports that face to face CBT-I with a therapist is superior to dCBT-I. The effect size of dCBT-I was overall large  $d = -0.71$ . However, the data has limited utility due to 90% of the studies having moderate to high risk of bias. Additional limitations were that the studies had short term follow up, risk bias by unblinded subjects, subjective self-reported outcomes, high attrition, and lacked US insomnia population generalizability. CDC surveillance data indicate that insomnia among US



adults disproportionately affects more demographically diverse populations, including men, racial and ethnic minorities, and individuals with lower socioeconomic status (CDC, 2023).

Chronic insomnia and cognitive function were evaluated by an RCT by Kyle et al (2020) comparing Sleepio (n=205) to wait listed control subjects (n=205). The Sleepio group showed large and clinically significant improvements in insomnia severity as measured by the self-reported Insomnia Severity Index (ISI) over the 10-week ( $d=-1.57$ ) and 24-week ( $d=-1.60$ ) follow-ups. Limitations include high attrition rate (40% non-completion for Sleepio group), the studies had short term follow up, risk bias by unblinded subjects, subjective self-reported outcomes, high attrition, and no clinician evaluated diagnosis. Participant selection was through social media, and excluded sleep medication use, bipolar disorder, and schizophrenia. The study lacked US insomnia population generalizability, with subjects 85.4% female, 97.6% Caucasian, 67.3% college education or higher in the Sleepio group, The weak study design used a wait listed control group which uses no intervention as a comparator. Insomnia reduction was evaluated by the ISI in the RCTs by Cheng et al (2019) and Cheng et al (2019) by comparing Sleepio (n=358) to sleep hygiene education (SHE) (n=300). Insomnia reduction effect measured by self-reported ISI was two times greater in the Sleepio group compared to the SHE group ( $d=-10.0$  Sleepio,  $d=-4.4$  SHE). Sleepio maintained superiority over SHE at one year follow up evaluating insomnia reduction by ISI self-report. Limitations included high attrition (69% drop out rate for Sleepio), risk bias by unblinded subjects, subjective self-reported outcomes, no clinician evaluated diagnosis, and lack of US insomnia population generalizability (subjects recruited from Southeastern Michigan 78% Caucasian, 85% with some college or higher, 59% middle or higher income). The study excludes diagnoses of bipolar disorder, sleep disorder, obstructive sleep apnea, restless legs, narcolepsy, severe depression, and long-term depression.

Insomnia severity was evaluated by the Epsie et al (2012) RCT analyzing 3 trial arms: Sleepio group (n=55), imagery relief therapy (IRT) (n=55), and treatment as usual (TAU) control (n=54). Sleep efficiency results showed large effects size in the Sleepio group ( $d=1.37$ ) relative to IRT ( $d=0.73$ ) and TAU ( $d=0.59$ ) groups within a short follow up. The study did not have US insomnia population generalizability with 73% female subjects. Insomnia severity was evaluated by the RCT by Epsie et al (2019) with 853 subjects to Sleepio + treatment as usual (TAU) (n=853) and 858 subjects to SHE + TAU. (n=858). Insomnia was assessed with the Glasgow Sleep Impact Index (GSII) showing a large effect size at 24 weeks in favor of Sleepio over SHE with  $d=-1.46$ . The high attrition rate included only 48.4% of subjects completing all 6 study sessions. The study lacked US insomnia population generalizability in the Sleepio group with 77.7% women and 91% Caucasian subjects. The study limitations included short follow up, lack of blinding, exclusion of subjects receiving psychological treatment for insomnia. Luik et al. (2020) followed the same group of subjects in the Epsie (2019) trial in an RCT to week 48 with only 21.3% participants contributing to data. A large effect size ( $d=1.54$ ) demonstrated insomnia improvement



difference Sleepio + TAU compared to SHE + TAU. Study limitations included the same listed for Epsie et al (2019) with the addition of a 78.7% attrition rate by the end of the study, which substantially limits the interpretability of the long-term outcome.

The RCT by Tamm et al. (2025), randomized 103 subjects to Sleepio or 102 subjects to SHE as the control. The Sleepio group resulted in significant reductions in self-reported ISI scores with a large effect size ( $d = -1.16$  at 10 weeks). Limitations included high attrition (69% drop out rate for Sleepio), risk bias by unblinded subjects, short follow up, subjective self-reported outcomes, no clinician evaluated diagnosis, and lack of US insomnia population generalizability (81% female, 92% Caucasian, 88% college education or higher), exclusion of bipolar disorder or psychosis, use of psychotherapy for insomnia or depression, use of sleep medications, and past year history of psychiatric admission. Prather et al. (2025) conducted an RCT comparing Sleepio (n=168) with online SHE (n=168). This decentralized trial recruited subjects across the US and did not have a very large majority of women (56%). Despite including a 56% of bachelor’s degree subjects this trial had a range of subject income levels. At week 24 the difference between Sleepio and online SHE had a large effect size ( $d = .77$ ). Limitations included risk bias by unblinded subjects, short follow up, subjective self-reported outcomes, no clinician evaluated diagnosis, and lack of US insomnia population generalizability due to exclusion of psychiatric medication use, diagnoses of psychosis, schizophrenia, bipolar disorder, seizure disorder, as well as occupation requiring alertness, uncorrected hearing or vision impairment,

## Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this policy are listed in [Table 1](#).

**Table 1. Summary of Key Trials**

NCT No.	Trial Name	Planned Enrollment	Completion Date
<b>Ongoing</b>			
<a href="#">NCT06419959</a>	NightWare and Cardiovascular Health in Veterans With PTSD	125	Sep 2026
<a href="#">NCT07021014</a>	NightWare and Cardiovascular Health in Women With PTSD	36	Jul 2028



NCT No.	Trial Name	Planned Enrollment	Completion Date
<a href="#">NCT06399874</a>	Nightmare Deconstruction and Reprocessing vs. NightWare Wristband (NDR/NW)	30	Mar 2026
<a href="#">NCT05148052</a>	Effect of Upper Extremity Rehabilitation Using Immersive Virtual Reality in Chronic Stroke Patients: A Prospective, Multicenter, Single-blind, Explorative, Randomized Crossover Trial	15	Oct 2025
<a href="#">NCT04379687</a>	Immersive Virtual Reality in Post Stroke Physiotherapy	44	Dec 2023
<a href="#">NCT05263037</a>	A Decentralized, Randomized, Controlled Trial to Study Health Outcomes of EaseVRx-8w+ for the Treatment of Chronic Lower Back Pain	1093	June 2026
<a href="#">NCT05816304</a>	Evaluating the Effectiveness of Digital Cognitive Behavioral Therapy for Insomnia in Frontline Health Care Workers (The HCW-CBTi Study): A 2-arm, Pragmatic, Prospective, Parallel Randomized Controlled Trial	366	April 2025 (recruiting)
<a href="#">NCT05185076</a>	A Prospective, Multicenter, Randomized, Masked, Controlled Pivotal Trial to Assess the Safety and Effectiveness of an Eye-Tracking-Based Treatment for Amblyopia Under Binocular Conditions Versus the Standard of Care, Monocular Deprivation Treatment (Occlusive Patching)	114	May 2022 (unknown)
<a href="#">NCT03206502</a>	Characterizing Sleep, Stress, and Seizures in Daily Life: An Internet-based Study With the Empatica Embrace Watch and Smartphone-based Diary-alert System	100000	May 2026
<a href="#">NCT05958095</a>	Supporting Maternal Mental Health and Emotional Regulation (SuMMER): Assessment of the Clinical Effectiveness of a Mobile Application for Patients With Postpartum Depression	142	August 2023 (unknown)
<a href="#">NCT04895995</a>	Initial Assessment of the Feasibility and Efficacy of a Scalable Digital CBT for Generalized Anxiety and Associated Health Behaviors in a Cardiovascular Disease Population	95	Mar 2026

Unpublished



NCT No.	Trial Name	Planned Enrollment	Completion Date
<a href="#">NCT03934658</a> <sup>a</sup>	A Remote Randomized Double-Blind Sham-Controlled Clinical Trial of NightWare in Adults with Post-Traumatic Stress Disorder and Co-Morbid Nightmare Disorder	400	Dec 2021 (completed)
<a href="#">NCT05365607</a> <sup>a</sup>	NightWare Therapeutic Platform for Improving Cardiovascular Health in Adults With Nightmares Associated With PTSD	40	Aug 2024
<a href="#">NCT04040387</a> <sup>a</sup>	Traumatic Nightmares Treated by NightWare (To Arouse Not Awaken) (TNT/NW)	270	Aug 2019
<a href="#">NCT04104191</a>	The LIVMOR Data Collection Study for the Development and Validation of L-1000 AF System	271	Feb 2019 (completed)
<a href="#">NCT04897074</a> <sup>a</sup>	A Single Arm Pivotal Trial to Assess the Efficacy of AKL-T01, a Novel Digital Intervention Designed to Improve Attention in Adolescents, Aged 13-17 Years Old, Diagnosed with Attention Deficit Hyperactive Disorder (ADHD).	165	Sept 2022 (completed)
<a href="#">NCT04678661</a>	My Dose Coach Titration and Maintenance in Patients with Type 2 Diabetes Mellitus on Basal Insulin	60	Feb 2023 (terminated)
<a href="#">NCT04826939</a>	Validity (and Reliability) of Two Forms of an Accelerometer-Based Intravaginal Device for Detecting Pelvic Floor Motion	30	Sept 2022 (results submitted)
<a href="#">NCT04785690</a>	A Prospective, Multicenter, Randomized, Masked, Controlled Pivotal Trial to Assess the Safety and Effectiveness of an Eye-Tracking-Based Treatment for Amblyopia Under Binocular Conditions Versus the Standard of Care, Monocular Deprivation Treatment (Occlusive Patching)	23	May 2023

NCT: National Clinical Trial

<sup>a</sup> Denotes industry sponsored or cosponsored trial.

## Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.



Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

## **American Academy of Ophthalmology (AAO)**

In 2024, the AAO Amblyopia Preferred Practice Pattern<sup>2</sup> acknowledged “software and hardware development has continued and has been associated with improved outcomes. Research with this technology is ongoing, which will be used to delineate use of binocular therapy for treatment of amblyopia. “. This preferred practice pattern was updated in 2022, and reaffirmed in 2024 to state, “Suitable treatment options for amblyopia include optical correction, patching, pharmacological treatment, optical treatment, Bangert (translucent) filters, and digital therapeutics, in addition to managing the underlying cause of amblyopia.”

## **National Institute for Health and Care Excellence (NICE)**

In 2022 the NICE published medical technologies guidance MTG70 recommending that “Sleepio is a cost saving option for treating insomnia and insomnia symptoms in primary care for people who would otherwise be offered sleep hygiene or sleeping pills.” The NICE also indicates that more research or data collection is recommended for those who are eligible for face-to-face cognitive behavioral therapy for insomnia (CBT-I) in primary care as there is limited clinical evidence to show the effectiveness of Sleepio compared to face-to-face CBT-I.

## **Medicare National Coverage**

There is no national coverage determination.

## **Regulatory Status**

In April 2025, CT-132 (Click Therapeutics, Inc.) received FDA clearance through the De Novo pathway (DEN240064) under 21 CFR Part 882.5806. “It is indicated for the preventive treatment of episodic migraine in individuals 18 years of age and older. It is intended for adjunctive use



alongside acute and/or other preventive treatments for migraine” per Click Therapeutics. Indication is not provided on the FDA website. FDA Product Code: SEEIn August 2024, DaylightRx (Big Health Inc.) received FDA 510(k) marketing clearance (K233872) as substantially equivalent to a marketed predicate device (Somyrst). It is available by prescription only and is considered a digital therapeutic device intended to treat those 22 years of age and older with generalized anxiety disorder as an adjunct to usual care by delivering Cognitive Behavioral Therapy (CBT). FDA Product Code: SCP.

In August 2024, SleepioRx (Big Health Inc.) received FDA 510(k) marketing clearance (K233577). The FDA states, “Sleepio is a digital therapeutic intended for the treatment of chronic insomnia/insomnia disorder as an adjunct to usual care in patients aged 18 and older. Sleepio is a prescription device delivering Cognitive Behavioral Therapy for Insomnia (CBT-I) and can be made available on the order of a licensed healthcare provider.” FDA Product Code: QVO

In April 2024, MamaLift Plus. (Curio Digital Therapeutics, Inc.) received FDA 510(k) marketing clearance (K223515) as substantially equivalent to a marketed predicate device (Somryst). “It is intended to provide neurobehavioral interventions to individuals 22 years of age and older as an adjunct to clinician-managed outpatient care. MamaLift Plus treats mild to moderate postpartum depression by improving a patient’s symptoms of depression.” FDA Product Code: SAP.

In March 2024, Rejoyn (Otsuka America Pharmaceutical Inc.) received FDA 510(k) marketing clearance (K231209) as substantially equivalent to a marketed predicate device (ReSET). It is also known as CT-152. “It is a prescription digital therapeutic for the treatment of Major Depressive Disorder (MDD) symptoms as an adjunct to clinician-managed outpatient care for adult patients aged 22 years and older who are on antidepressant medication. It is intended to reduce MDD symptoms.” FDA Product Code: SAP.

In February 2024, EpiMonitor (Empatica Inc.) received FDA 510(k) marketing clearance (K232915) as substantially equivalent to a marketed predicate device. It is indicated as an adjunct to seizure monitoring in adults and children aged 6 and older in a home environment or healthcare facility. It is composed of a wearable device (EmbracePlus) that is paired with a mobile software application (EpiMonitor). The device worn on the wrist senses Electrodermal Activity (EDA) and motion data to detect patterns that may be associated with primary or secondary generalized tonic clonic seizures in patients with epilepsy or at risk of having epilepsy. When a seizure event is detected, the wearable device sends a command to a paired mobile device which initiates an alert to a designated caregiver. The EpiMonitor mobile app stores and transmits accelerometer, EDA, peripheral skin temperature and activity data for review by a trained healthcare professional via Cloud-based software. FDA Product Code: POS



In 2022, CureSight-CS100 (NovaSight, Ltd.) received FDA 510(K) marketing clearance (K221375) as substantially equivalent to a marketed predicate device (the Luminopia One). "It is indicated for improvement in visual acuity and stereo acuity in amblyopia patients, age 4 to <9 years, associated with anisometropia and/or with mild strabismus, having received treatment instructions (frequency and duration) as prescribed by a trained eye care professional" It is intended to be used as an adjunct to full-time refractive correction (i.e., glasses). FDA Product Code: QQU.

In 2021, Luminopia One (Luminopia, Inc.) received FDA clearance through the De Novo pathway (DEN210005) under 21 CFR Part 886.5500. It is indicated for improvement in visual acuity in amblyopia patients, aged 4 to 7, associated with anisometropia and/or with mild strabismus, having received instructions (frequency and duration) as prescribed by a trained eye-care professional. Luminopia One is intended to be used as an adjunct to full-time refractive correction, such as glasses, which should also be worn under the virtual reality headset during Luminopia One therapy. It is for prescription use only, in an at-home environment. FDA Product Code: QQU.

In 2021, RelieVRx (formerly EaseVRx) (AppliedVR, Inc.) received FDA clearance through the De Novo pathway (DEN210014) under 21 CFR Part 801.109. It is indicated as a prescription-use, in-home use immersive virtual reality system intended to provide adjunctive pain-relief treatment based on cognitive behavioral therapy skills for individuals aged 18 and older with a diagnosis of chronic low back-pain, defined as moderate to severe pain that has lasted longer than three months. FDA Product Code: QRA.

In 2020, EndeavorRx (Akili Interactive Labs, Inc.) received FDA clearance through the De Novo pathway (DEN200026) under 21 CFR Part 801.109. It is defined by FDA as "a software intended to provide therapy for ADHD or any of its individual symptoms as an adjunct to clinical supervised treatment." It is indicated to improve attention function as measured by computer-based testing in children ages 8 to 12 years old with primarily inattentive or combined-type ADHD, who have a demonstrated attention issue. In 2023 the device subsequently received 501(k) clearance (K231337). FDA Product Code: QFT.

In 2020, Halo AF Detection System (LIVMOR, Inc.) received FDA 510(k) marketing clearance (K201208) as substantially equivalent to a marketed predicate device (FibriCheck). It is indicated for use by individuals who have been diagnosed with or are susceptible to developing atrial fibrillation and who would like to monitor and record their pulse rhythms on an intermittent basis and alert their physicians of any detected irregular heart rhythms. It is used in conjunction with the LIVMOR Halo + Home Monitoring System and is not validated for use with any other pulse monitoring system. FDA Product Code: DXH.



In 2020, NightWare (NightWare, Inc.) received FDA clearance through the De Novo pathway (DEN 200033) under 21 CFR Part 801.109. It is indicated to provide vibrotactile feedback on an Apple Watch, based on analysis of heart rate and motion during sleep for the temporary reduction of sleep disturbance related nightmares in adults 22 years or older who suffer from nightmare disorder or have nightmares from posttraumatic stress disorder (PTSD). It is intended for home use. FDA Product Code: QMZ.

In 2018, the leva Pelvic Floor Trainer (Renovia, Inc.) received FDA 510(k) marketing clearance (K180637) as substantially equivalent to a marketed predicate device. The FDA states its indications for use are: "1) strengthening of the pelvic floor muscles and 2) rehabilitation and training of weak pelvic floor muscles for the treatment of stress, mixed, and mild to moderate urgency urinary incontinence in women." The device interacts with the user via smart phone technology. In 2019, the FDA expanded the indications for use of the leva Pelvic Digital Health System (K192270) to include women with overactive bladder. FDA Product Code: HIR.

In 2021, the leva Pelvic Health System (Renovia, Inc.) received 510(k) marketing clearance (K212495) as substantially equivalent to their previously marketed predicate device. This model is called leva-02 and was tested with a risk analysis performed for biocompatibility based on the changes made to the device in hardware and software. FDA Product Code: HIR.

In 2018, MindMotionGO (MindMaze) received FDA 510(k) marketing clearance (K173931) as substantially equivalent to previously marketed predicate devices. FDA states its indication for use is, "as a medical device software used in combination with the Microsoft Kinect v2 and Leap Motion controller that supports the physical rehabilitation of adults in the clinic and at home. The software includes rehabilitation exercises for the upper extremity, trunk, and lower extremity." Approval by a medical professional is required prior to use. FDA Product Code: LXJ.

In 2017, BlueStar Rx (WellDoc, Inc.) received FDA 510(k) marketing clearance (K162532) as substantially equivalent to a marketed predicate device DiabetesManagerRx (the initial and subsequent clearances prior to this provided coaching messages based on real-time blood glucose levels but had no insulin dose calculator [K100066 2010, K112370 2011, K120314 2012, K141273, 2014 BlueStar name first used, K162225 2016]). The FDA states, "It is indicated for use in individuals 21 years of age or older who have type 2 diabetes. The software system captures, stores, and transmits blood glucose data and then analyzes and reports the data in support of diabetes self-management by providing coaching messages (motivational, behavioral, educational) based on real-time blood glucose values. The software is for use on mobile phones or personal computers. It also includes an insulin dose calculator which allows individuals to calculate a dose of their prescribed insulin regimen for a given amount of carbohydrates and/or blood glucose value". FDA Product Code: LNX, NDC.



In 2019, the FDA expanded the indications for use of BlueStarRx to individuals 18 years of age or older who have type 1 or type 2 diabetes. (K190013). FDA Product Code: MRZ, NDC.

In 2020, the FDA expanded the indications for use of BlueStarRx to basal insulin users with type 2 diabetes and now includes an Insulin Adjustment Program (IAP) (K193654) which calculates appropriate long-acting basal insulin doses for titrating insulin levels based on configuration by a healthcare provider (the healthcare provider must activate and configure the IAP for individual-specific parameters). FDA Product Code: MRZ, LNX, NDC.

In 2021, the FDA cleared a BlueStarRx modified device (K203434) to add a bolus titration feature and compatibility with pre-mixed insulin. FDA Product Code: NDC.

In 2017, My Dose Coach (Sanofi, Inc.) received FDA 510(k) marketing clearance (K163099) as substantially equivalent to a marketed predicate device. The indications for use described by the FDA state "it is indicated for single individual use outside the clinic setting by a previously diagnosed Type 2 Diabetic who has been prescribed a once-daily long-acting basal insulin." The FDA notes it is to be used as an aid to the individual to provide dose suggestions based on individualized dose instructions configured and activated for the individual by the health care provider. The dose suggestions are based on the individual's fasting blood glucose and hypoglycemic occurrences. Later in 2017 it was updated (K171230) to state it provides dose suggestions of once-daily long-acting insulin (i.e., basal insulin titration) based on the individual's fasting blood glucose and hypoglycemic occurrences. FDA Product Code: NDC.

In 2016, Insulia Diabetes Management Companion (Voluntis) received FDA 510(k) marketing clearance (K161433) as substantially equivalent to a marketed predicate device. The FDA states, "it is indicated for use by healthcare professionals and their type 2 adult diabetes individuals treated with long-acting insulin analog." The FDA notes that the software provides "secure capture, storage, and transmission of diabetes-related healthcare information to enhance data management, to display reports and graphs, and to aid the healthcare professional and the individual in the review, analysis, and evaluation of individual data in order to support effective diabetes management." It includes a basal calculator to provide direction to the individual in response to blood glucose and health events based on the treatment plan provided by a healthcare professional for insulin adjustments. It is compatible for use with the following long-acting analogs: Lantus, Levemir, Toujeo, Basaglar, and Tresiba. Additional dosing modifications of these insulin analogs received FDA 510(k) marketing clearance in 2017 (K170669) and (K172177), and in 2020 (K202596) when it was modified to be compatible with Semglee long-acting insulin. In 2023 (K232451) Insulia Bolus Companion received 510 (k) clearance for the indication of calculating an insulin dose or suggesting carbohydrate intake based on user entered data after a healthcare professional provides patient-specific target blood glucose,



insulin doses based on fixed or variable meal sizes, and insulin sensitivity parameters that are programmed into the software. FDA Product Code: NDC.

In 2001, RevitalVision (Talshir Medical Technologies LTD) (formerly AA-1 System by NeuroVision, Inc.) received FDA 510 (k) marketing clearance (K012530) as substantially equivalent to a marketed predicate device (Haploscope, Humphrey Visual Field Analyzer, and Eye Shield). The FDA states it is indicated “for the treatment of amblyopia using an interactive computerized program in patients 9 years of age or older suffering from amblyopia.” FDA Product Code: HJT.

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## History

Date	Comments
08/01/21	New policy, approved July 13, 2021. Add to Miscellaneous section. Medically necessary when criteria are met. Investigational when all criteria are not met.
10/01/21	Updated Related Policies, added policy 3.03.03 Prescription Digital Therapeutics for Attention Deficit/Hyperactivity Disorder.
04/01/2022	Coding update. Added new HCPC code A9291.
05/01/22	Interim Review, approved April 12, 2022. Added d-NavInsulin Management Program, Insulia Diabetes Management Companion, My Dose Coach basal titration, Ileva Pelvic Health System, and MindMotion GO to the list of FDA approved prescription digital therapeutics that are considered investigational.
07/01/22	Interim Review, approved June 14, 2022. Added RelievRx for the treatment of chronic low back pain to the list of FDA approved prescription digital therapeutics that are considered investigational.
09/01/22	Interim Review, approved August 9, 2022. Added Mahana for IBS to the list of FDA approved prescription digital therapeutics that are considered investigational.



Date	Comments
10/01/22	Interim Review, approved September 12, 2022. Removed content on Canvas DX as it is now addressed in 3.03.01 Prescription Digital Health Diagnostic Aid for Autism Spectrum Disorder. Updated description of A9291. Changed the wording from "patient" to "individual" throughout the policy for standardization.
01/01/23	Annual Review, approved December 13, 2022. Policy reviewed. References added. Added CureSight to the list of FDA approved prescription digital therapeutics that are considered investigational. Added CPT codes 0704T, 0705T, 0706T. Added new CPT codes 0740T and 0741T effective 1/1/2023.
04/01/23	Coding update. Added new HCPC code E1905.
07/01/23	Annual Review, approved June 13, 2023. Policy reviewed. References added. Added Regulora and Luminopia One to the list of FDA approved prescription digital therapeutics that are considered investigational.
10/01/23	Coding update. Added new HCPCS code A9292.
11/01/23	Interim Review, approved October 10, 2023. Removed policy 5.01.35 Prescription Digital Therapeutics for Substance Use Disorder from Related Policies. Removed Pear Therapeutics products ReSet, ReSet-O, and Somryst from this policy as they are longer in business. Removed HCPCS code A9281 from policy.
02/01/24	Interim Review, approved January 9, 2024. Added ReSet and ReSet-O back to the list of PDTs that are considered investigational as they were bought by PursueCare from Pear Therapeutics, Inc. Added 5.01.643 Prescription Digital Therapeutics for Substance Use Disorder to Related Policies. Added HCPCS code A9291. Correction to the above 11/01/23 History entry: the code removed was A9291, not A9281.
04/01/24	Interim Review, approved March 25, 2024. Added note to see 10.01 523 Preventive Care for FDA approved or cleared mobile apps related to contraception and birth control that are prescribed by a health care provider.
06/01/24	Interim Review, approved May 14, 2024. Policy reviewed. References added. Added EpiMonitor, Rejoyn, and MamaLift Plus to the list of FDA approved prescription digital therapeutics that are considered investigational. Added CPT codes 0687T and 0688T (moved from E&I policy.) Added HCPCS code S9002.
10/01/24	Annual Review, approved September 10, 2024. Policy reviewed. References added. Added RevitalVision to the list of FDA approved prescription digital therapeutics that are considered investigational. Removed HCPCS code T1505.
01/01/25	Coding update. Added new HCPCS codes G0552, G0553, G0554.
02/01/25	Interim Review, approved January 14, 2025. Added DaylightRx to the list of FDA approved prescription digital therapeutics that are considered investigational.
09/01/25	Annual Review, approved August 12, 2025. Policy reviewed. References added. Added CT 132 to the list of FDA approved prescription digital therapeutics that are considered investigational.



Date	Comments
04/01/26	Annual Review, approved March 10, 2026. Policy updated with literature review through September 22, 2025; references added, references updated, and references deleted. Added SleepioRX to list of investigational digital therapeutic devices that are considered investigational. Removed d-Nav Insulin management, Mahana for IBS, and Regulora for IBS as they are no longer marketed in the US. Added new HCPCS code A9294, effective April 1, 2026.

**Disclaimer:** This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2026 Premera All Rights Reserved.

**Scope:** Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.

