

Health & Wellness Solutions

www.healthwellness.solutions

Health & Wellness Solutions Marketplace



List of Marketplace Businesses

Represented

Experience Life Clothing, Pool & Spa Therapy,
Dispensary, Cannabis Lounge,
Yoga & Meditation, Virtual Exploration Theare,
Marketplace for Food & Drinks,

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Mobile technology to connect patients to remote doctors

Country of origin | United States of America

Health data monitoring

Health problem addressed

The bottom of the pyramid population in the developing world continues to face fundamental challenges in healthcare, due to lack of access, low affordability, low quality and exploitative care, and a reactive, emergency-driven system. Existing solutions lack financial and human resources and show suboptimal use of limited resources.

Product description

We developed an Integrated Mobile Health Technology Platform that enables frontline health providers (community health workers, rural nurses and doctors) to connect patients to remote doctors in order to obtain timely medical diagnosis and administer effective treatment for underserved patients. Selected awards: Winner at the 2008 MIT 100K Entrepreneurship Competition and Best Telemedicine Innovation at the 2009 World Health Care Congress.

Product functionality

Frontline health providers use the mobile application to perform health risk screening and medical triage to identify health concerns. The diagnostics application on the phone instructs health providers with immediate actions to care for the patient, or transmits the case to remote doctors for further diagnosis and treatment advice.

Developer's claims of product benefits

This solution is cost-effective as it requires no additional equipment or infrastructure by using available mobile phones, mobile connectivity and local health providers. Training for local health providers takes less than an hour because all users are already familiar with the use of mobile phones. Maintenance is minimal as local phone stores are capable of maintaining the mobile devices. The service reduces travel costs, minimizes time to obtain treatment (from weeks to minutes), and is accessible locally to underserved patients via health workers or close-by rural clinics.

Operating steps

Frontline health providers use mobile phones to access the diagnostics application. They enter patient symptoms information by going through a series of decision-tree based medical algorithm. For cases requiring remote doctor consultation, the phone transmits the patient symptoms information via mobile broadband or SMS/MMS to the remote doctor.

Development stage

The product was technically evaluated and tested for clinical effectiveness via concordance rates between in-person and mobile-transmitted remote diagnosis in Egypt, Ghana, Botswana, the US. We pursue various partnerships. Partners include mHealth Alliance, BRAC, Sajida Foundation, Mobinil Egypt, Orange Botswana, University of Pennsylvania Medical School, Harvard, MIT, American Academy of Dermatology.

Future work and challenges

Our applications and business model were tested through pilots in over 10 countries. The basic technology proposition was proven and patient acceptability demonstrated. We are now ready to test commercial scalability by 1) improving our technology platform to support large scale usage from current ~500,000 beneficiaries to >1 million, 2) expanding distribution channels, 3) refining service models to suit our markets.

Use and maintenance

User: Patient, family member, nurse, midwife, physician

Training: 30-60 min walk-through of the mobile application.

Maintenance: Technician, engineer, manufacturer

Environment of use

Requirements: Mobile connectivity, access to a power source to charge mobile phones.

Product specifications

Dimensions (mm): 110 x 47 x 14 (approx.)

Weight (kg): 0.008

Life time: Varies by phone model

Retail Price (USD): Varies

Year of commercialization: 2009

Currently sold in: US, Botswana, Bangladesh

Commercialized

Compendium of new and emerging technologies that address global health concerns 2011

MOTHER NATURE'S ANXIETY ALLEVIATORS

A user's guide to managing stress in a pandemic using terpenoids

Terpenes are some of nature's greatest healing operatives and are found abundantly in essential oils, vegetables, fruit and spices. Cannabis also has terpenes which gives each strain its unique aroma and flavor. In addition to sensory stimulation, terpenes have their own set of healing properties that include anticancer, antimicrobial, antifungal, antiviral, antihyperglycemic, analgesic, anti-inflammatory, and antiparasitic benefits. To follow are three calm-inducing terpenes known to help with anxiety.

Linalool. Marked by a strong floral scent, linalool is a terpene found in cannabis and lavender as well as several other flowering plants. The fragrant terpene possesses sedative properties used to fight anxiety and stress and is found in varieties of Bubba Kush. A study published in the July 2010 edition of *Phytomedicine* found that linalool decreased aggressive behavior in mice. A dab of lavender oil rubbed on your temples or to your wrist can reduce your anxiety because it is filled with linalool. This terpene is said to make SSRIs (especially Paxil, paroxetine) more effective.



Limouene. With its strong citrus smell and taste, limonene is associated with euphoric effects. Derived from the oil of citrus peels, such as lemon or oranges, limonene is known as one of the best terpenes for anxiety, as strains enhanced with limonene are known to relieve paranoia or restlessness. Clinical studies show that limonene has demonstrated a significant anti-depressive effect, which sheds light on this terpene's presence in famous strains aimed at combating depression such as Gelato, Tangerine Dream, and Super Lemon Haze.

Caryophyllene. Strains that have caryophyllene are known to be some of the most restful, calming strains currently available on the market, and can be used to treat conditions ranging from arthritis to Alzheimer's. A 2014 study published in the *Physiology & Behavior* journal found that beta-caryophyllene reduced the anxiety levels in rodents forced to go through a maze. It is a terpene that works particularly well with CBD and is found in cloves, hops, black pepper, and rosemary essential oils. As for cannabis, you can find the calming terpene in the Cookies family of cultivars, Sherbert, and Gorilla Glue #4. ♦

KICKING HIGH ANXIETY TO THE CURB



BASKIN IN THE GLOW Las Vegas cultivator LJ Robinson recommends BASKIN Body Wellness Cream with 400mg of CBD for the cannabis newbie who is looking to calm their nerves. "It's a great transdermal product, more scientific than just a lotion. For me as someone who deals with a lot of anxiety, it's something that's not going to overwhelm and will ease them

into it. Just apply a little bit on the temples and a little bit on the back of neck. I carry a lot of stress tensions, it's helpful to let those muscles relax." baskincbd.com



READY TO RELAX *creative editor* Beth Schwartz suggests Creative Waters Co.'s RELAX 3:1 CBD to THC cannabis-infused sparkling water for the cannabis newcomer. "It calms my mind and also helps me to focus, and I even enjoyed some free flowing creativity," reports Schwartz of RELAX sparkling water. "And with a sassy flavor profile of passion fruit, tangerine and coconut, it not only tastes like you are lounging poolside at a tropical resort, but more importantly it makes you feel like you are." creativewatersco.com



PUTTING THE AROMA IN THERAPY In a classic case of form following function, Peppermint Field offers one of the most functionally clever CBD products on the market. Designed as a two-for-one, you can either take a quick sniff from the CBD Aromastick to lower your anxiety in an instant or twist its bottom and tap out a few drops of the magical elixir to rub on your temples. Either way you will be giving your senses a burst of freshness in the form of pinene terpenes mixed with menthol, peppermint oil and eucalyptus oil vapors that immediately delivers calm and sends your anxiety away. euphoricinfusions.com

FOR THE WIN In itself, a soak in the tub is a relaxing proposition. Now imagine doing it with 50mg of healing CBD. Heather Varick, founder of Hot Mess Kushmetics, suggests her High Jump CBD Bath Bomb for delivering the goods. In addition to each Bath Bomb containing the relaxing and calm-inducing properties of CBD and skin-loving shea butter to moisturize and protect your skin, you will get

an extra jump of stress relief with an infusion of lavender and eucalyptus essential oils. hotmesskushmetics.com





DIGITAL HEALTH

ESSENTIAL



■ See the Digital Health Ecosystem at CES ■

Digital health tech continues to provide innovative solutions to diagnose, monitor and treat diseases and new advances in health care delivery. Tech today empowers consumers to take control of their wellness and health care, saving lives while lowering costs and delivering better outcomes. CES displays the new tools and technologies that enhance the patient's experience and is transforming the future of health care.



It includes empowering patients to better track their own health, changing how medical professionals are trained using virtual and augmented reality, and improving patient diagnosis thanks to advances in artificial intelligence. Advances in digital therapeutics, wearables and remote patient monitoring are also addressing real world issues like opioid dependence, mental illness and chronic disease.

Attendees can experience the full digital health ecosystem with a comprehensive exhibit space and dedicated conference programming at the Sands. Medical professionals, digital health startups, corporations in health care, investors and health care analysts all attend. Embracing digital health and smart home technology is the best way to serve a rapidly aging population, and it's all on display at CES.

CES Marketplaces

A number of technology-specific areas of the show floor are dedicated to different aspects of digital health.

At the **Health & Wellness Marketplace**, see the innovative solutions for diagnosing, monitoring and treating illnesses and advancements in health care delivery and smarter lifestyles.

Technology's influence on our health has reached our dreams. At the **Sleep Tech Marketplace**, take in everything from sleep trackers and silent alarms, to bedroom lighting, white noise and even smart beds. Advancements in sleep technology are gaining valuable intelligence on our sleep patterns and needs.

See the devices that empower consumers to track everything from their heart rate to their mood, activity and even their pets at the **Wearables Marketplace**. This Marketplace covers everything from the implementation of low-energy Bluetooth to cloud computing, flexible membranes and 3D printing.

Visit these Marketplaces in the Sands, Level 2 to see the latest innovation in digital health tech.

CME Credits at CES 2020

For the second year, GTA is partnering with the American College of Cardiology (ACC) Foundation to offer Continuing Medical Education (CME) credits at CES to doctors, nurses and other medical professionals to highlight tech innovations for patient care. The Disruptive Innovations

in Health Care conference, in partnership with the ACC, takes place on Jan. 8. Conference topics include home health care, patient-generated data, remote patient monitoring, and other relevant areas.

Join the Health and Fitness Division

GTA's Health and Fitness Division's members include Fitbit, Intel, Johnson & Johnson, Microsoft and Samsung. The group recently released the *Guiding Principles for the Privacy of Personal Health and Wellness Information*. Key initiatives for the division include conducting market research around health and fitness devices, providing GTA members with networking opportunities, and educating stakeholders about health and fitness products. GTA strives to ensure these devices, services and apps exist in a sound regulatory environment that balances innovation with consumer safety and privacy.

Setting the Standard

GTA works to develop industry standards to enable interoperability between new and existing products. Here is a sample of some recent health and fitness standards:

- ◆ ANSI/GTA-NSF-2052.1, *Definitions and Characteristics for Wearable Sleep Monitors*
- ◆ ANSI/GTA-2054, *Physical Activity Monitoring for Fitness Wearables: Step Counting*
- ◆ ANSI/GTA-2055, *Physical Activity Monitoring for Heart Rate*
- ◆ ANSI/GTA/NSF-2052.3, *Performance Criteria and Testing Protocols for Features in Sleep Tracking Consumer Technology Devices and Applications*

Visit standards.GTA.tech.

GTA MARKET RESEARCH

These studies and other relevant GTA research are available at GTA.tech:

- ◆ *Assessing the Landscape for Digital Therapeutics*
- ◆ *Connected Health and Remote Patient Monitoring: Consumer and Industry Use* ■



ARTIFICIAL INTELLIGENCE

Artificial Intelligence Goes Beyond Robots

From your phone to your car, artificial intelligence (AI) is an essential element of all types of technology these days. At CES 2020, you can find this foundational ingredient to tech distributed far beyond its own **AI & Robotics Marketplace**, including C-Space, Fitness, Smart Cities, Vehicle Tech and more. At CES, it is evident AI is making our products better and more personalized — improving our health, work and lives. And while robotic improvements will render some current jobs obsolete, it will create new, more highly skilled jobs, including those we cannot even imagine yet.

CES will continue the conversation on AI's benefits, so companies showcase products revolutionizing speech recognition, machine learning, artificial decision-making and predictive tech. The industry is excited to see how these technologies will be integrated to simplify our everyday lives and solve global problems, like traffic, sustainability or hunger. Other industries too, like retail, will benefit, as AI will improve facial recognition and big data analytics.

AI at CES

CES is the place to see the next generation of intelligent, autonomous machines, self-driving cars and connected homes using AI. For example, CES is testing facial recognition for badge pickup in a few locations. And the CES App, CES Facebook page and CES Twitter page will once again feature chat bots powered by AI technology. All three bots use exhibitor session and CES show information to provide users with answers to their questions about CES 2020. And the Social Media Command Center, powered by Buzz Radar, gives a unique, authoritative view on trends, breaking stories and social insights by analyzing over one million posts mentioning CES 2020 in real-time, then visualized as an interactive universe in the LVCC Grand Lobby and ARIA C-Suite.

Artificial Intelligence and Robotics

Marketplace (LVCC, South Hall) features 60-plus exhibitors including:

- + Brunswick
- + Doosan
- + FTP Industrial
- + John Deere
- + Kyocera
- + Buring

The Business Case for AI

AI applications in B2B and B2C markets are ushering in a new IoT — the Intelligence of Things. Through machine-learning, AI enables process automation, object detection, speech recognition and other benefits to businesses. Voice computing (through voice-activated digital assistants like Google Assistant and Amazon Alexa) is becoming common for device control functions, accessing streaming media services, internet search and shopping.

Edge applications, that move some or all AI processing out of the cloud and into the user's hands, are improving battery life and shortening latency for critical functions.

RESEARCH SHOWS CONSUMERS FIND AI VALUABLE

GfA research shows consumers are excited about robotics for consumer applications — especially those that can perform household chores. According to the U.S. Consumer Technology Sales and Forecasts 2018-2020, 3.5 million consumer robots shipped in the U.S. last year, and this figure will increase to 18% to 4.1 million in 2020.

Meanwhile, smart speakers such as Amazon Echo or Google Home have dominated the tech market with \$3 billion in sales and 26.3 million units sold. These technologies, activated by AI, let users search the internet via voice, and double as the central hub for apps and smart devices, enabling consumers to control their TV, thermostat and other devices by voice. Smart speakers will soon be in retail locations, cars, appliances and office tools.

GfA's *Artificial Intelligence: Consumer Sentiments 2018* report looks at awareness and interest among consumers regarding AI and its applications. It examines the use of AI-driven features (voice-enabled digital assistants, chatbots and content recommendations/personalization) and gauges consumer sentiment concerning the future impact of AI on workforce automation and self-driving vehicles. ■

