

CORE MOBILE, INC.

TELEMENTAL HEALTH & BEHAVIORAL HEALTH BEFORE, DURING, & AFTER PANDEMICS



White Paper

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1. EXECUTIVE SUMMARY

Mental health plays an integral role in the lives of individuals, families, and societies, but one in five adults experience mental illness while barriers to treatment and the onset of a pandemic exacerbate the problem. Learn more about:

- The impact of mental illness on individuals and society
- The impact of the COVID 19 Pandemic on mental health
- How virtual mental health treatment can help remove barriers to access to care
- Core Mobile's virtual mental health solution for patients and providers
- Core Mobile's virtual mental health solution for suicide prevention

2. THE PROBLEM

Mental Health is essential to well-being, yet mental illness affects tens of millions of Americans every year. Prior to the COVID-19 pandemic, suicide rates have continued to increase annually while one in five adults were living with mental illness. The pandemic has exacerbated the mental health of millions more.

Since the start of the COVID-19 Pandemic, mental health has suffered across all age groups with the onset of self-isolation and quarantine restrictions. Almost half of the adult population has reported a negative impact on their mental health since the start of the Pandemic. Factors such as isolation, job loss, and economic hardship all contribute to the declining mental health experienced by the population.

In addition, the stress induced by the pandemic has resulted in a rising number of psychosomatic COVID-19 cases, in which patients have all of the symptoms of COVID-19 without any medical explanation for the symptoms, COVID-19 and other tests are negative.

**1 IN 5
ADULTS**

Were suffering from mental illness before COVID-19. [1]

**44.8%
OF ADULTS**

Who have a mental health condition, do not seek treatment [2]

**45%
OF ALL ADULTS**

Have recorded a negative impact on their mental health due to COVID-19. [3]

Most disturbing, the COVID-19 Pandemic has harmed the mental health of front-line responders, like physicians and nurses. Under normal circumstances, 50% of physicians are affected by burn out.[4] During the pandemic, long hours, distance from loved ones, and supply shortages which have resulted in the need for triaging of patients, has resulted in the potential for negative psychological affects expected to last beyond the pandemic.[5]

Perceptions around mental health and the need to treat mental illness are the most common barriers for seeking treatment, while long wait times for appointments exacerbate the problem. What is more, the pandemic has resulted in the closure of many healthcare departments unrelated to COVID-19, creating a distinct care gap in the healthcare system. This is where a virtual behavioral care solution can help.

3. IMPROVING PATIENT OUTCOMES WITH VIRTUAL MENTAL & BEHAVIORAL CARE

The leading causes for not seeking treatment for mental health disorders are:

- Stigma associated with mental illness:
- Negative perceptions around mental health treatment
- Long wait times for mental health appointments
- Pandemic-related cancellations and delays due to temporary facility closures

Virtual care can alleviate some of the barriers to seeking, receiving, and continuing treatment by reducing wait times and providing confidential and cost-effective care from the convenience of a mobile device or desktop. In addition, virtual care offers opportunities for continuation of care during pandemics when self-isolation and quarantine are in place.

" Virtual care offers opportunities for continuation of care during pandemics when self-isolation and quarantine are in place."

4. CORE MOBILE FOR VIRTUAL MENTAL & BEHAVIORAL HEALTH

Core Mobile's solutions for mental and behavioral health utilize its patented platform and comes with:

- A mobile app for use by patients/public for mental health and suicide reduction
- A mobile app for use by care providing staff
- A Web Application for care providers



In addition, the solution comes with the server software required by the care team for implementing a scalable solution for the Behavior Health Screening tool using cloud based computing capability in a HIPAA and FISMA certified and ADA (American Disabilities Act), GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act) compliant manner.

The platform is customizable to support pre-built standardized questionnaires including BPRS/BIMS, BDI, MDQ, BAI, PHQ 9, MMSE and others. In addition, new questionnaires may be added or built as needed for clinical research by mental health professionals without the need for computer programming.



4.1 MOBILE APP & WEB APP FOR PATIENT OR PUBLIC USE



Core Mobile leverages existing technologies used by the public to deliver a native Mobile app on iPhones, iPads, and Androids for patients. Used for:

- Taking questionnaires before and during the treatment
- Mental health assessments
- Patient education & engagement
- Mental health resources
- Electronic patient reported outcomes
- Sending & receiving messages with care providers using voice-to-text, images, videos
- Video consultations in real time on demand
- Live video sessions with provider as per pre-defined schedule

Reduce Appointment Wait Times

Patient Wait Times are Reduced Between

5% and 20%

4.2 MOBILE APP & WEB APP FOR US BY CARE PROVIDERS



The Core Mobile solution for mental & behavioral health comes with a Mobile app and WebApp for care providers. Used for::

- Reviewing/revising questionnaires
- Review responses
- Adjusting the care pathways for CBT/CPT
- Messaging patients
- Intra-staff messaging
- Video consultations in real time
- Live video sessions with patients
- Remote monitoring of patients etc.

Reduce Cancellations/No-Shows

Core Mobile Solutions Reduce Cancellations & No-Shows Between

5% and 40%

4.3 CLOUD/ON-PREMISE BASED SERVER

Cloud or on-premise based server to:

- Perform questionnaire collection, interpretations, correlations, and messaging
- Enforcement of the care pathways



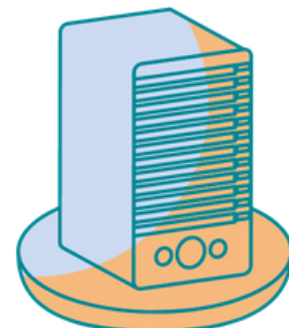
4.4 ANALYTICS SERVER



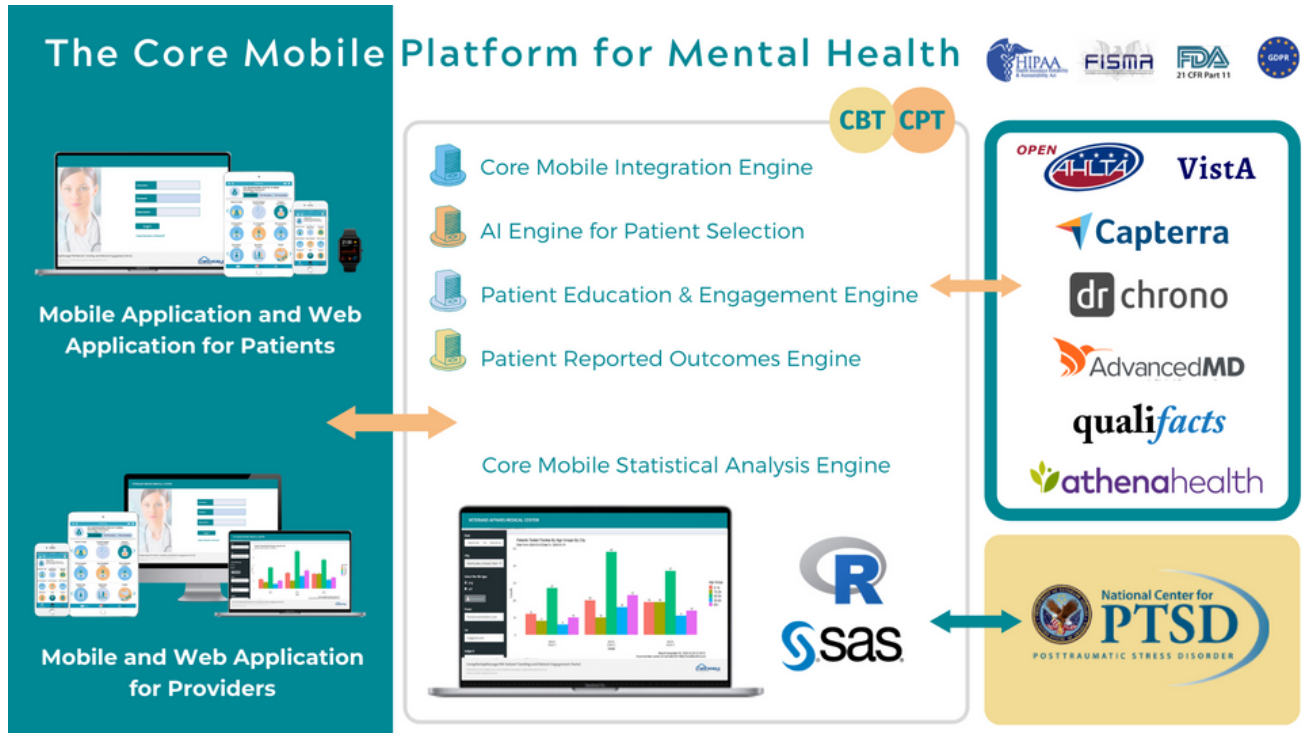
Analytics server to assist with analysis and generation of reports, watch trends, and predict pathway based on trends.

4.5 INTEGRATED SOFTWARE

Integration software for integration to EHRs/EMRs and any other clinical systems at care facility.



4.6 HOW IT WORKS



Core Mobile's solutions integrate with existing clinical systems at mental health facilities, allowing for seamless integration into the established workflow.

Increase Patient Throughput

Core Mobile Solutions Increase Patient Throughput Between

5% and 20%

4.7 CORE MOBILE SCREENING TOOL FOR FILTERING & TRIAGING OF PATIENTS

During times of crisis, behavioral health providers need a tool for sorting and triaging patients based on risk level. The ability to filter through patients and treat them according to their needs increases patient throughput and improves patient outcomes.

Core Mobile's Mental & Behavioral Health solution assists providers by delivering a tool that engages patients in the care process and produce reports based on patient input. The Core Mobile solution for mental and behavioral health can particularly assist patients struggling from:

- PTSD
- Suicidal thoughts
- COVID-19 related mental health struggles

This is due to the immediate nature of virtual treatment, coupled with access to mental health materials and next steps between appointments.

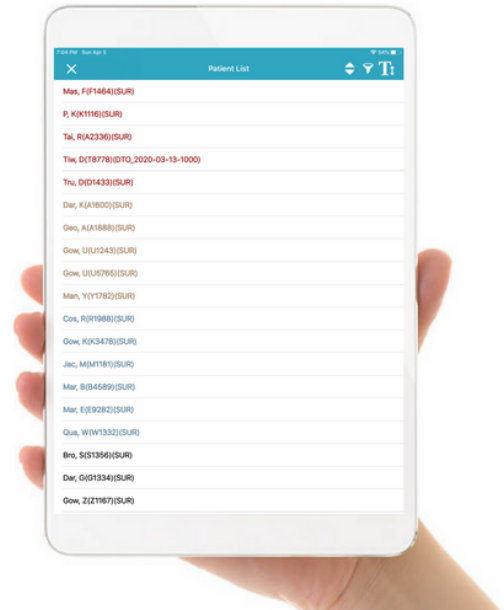
4.7.1 STANDARDS BASED QUESTIONNAIRES

As part of the screening tool, the Core Mobile application for healthcare providers, CoreyHealth™, gives providers a selection of easy-to-complete questionnaires that can be pushed to patients via the patient application, CoreyPatient™. Questionnaires can be customized by psychiatrists from within the user-friendly system.

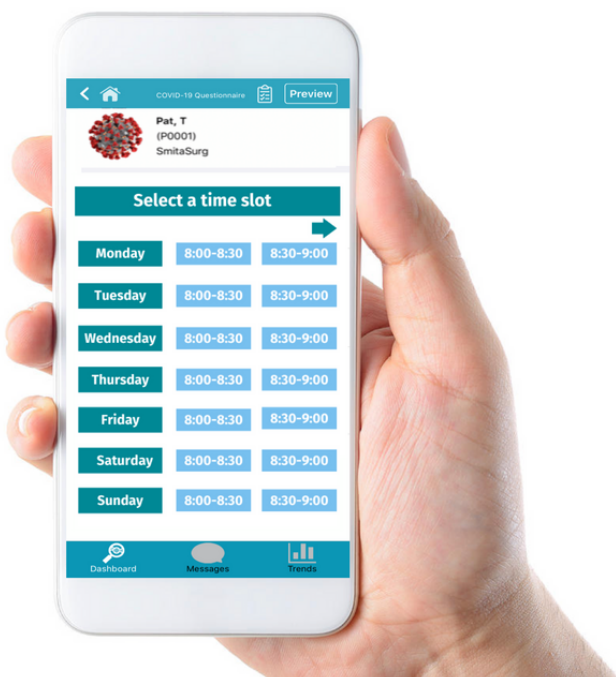


4.7.2 RISK ASSESSMENT

Once patients have completed questionnaires, the intelligent system automatically organizes a patient list based on risk level which appears on the provider application, CoreyPatient™. After video consultations, providers complete a questionnaire and make notes within the CoreyHealth™ application, prompting the system to automatically reorganize patient risk level. Providers also have the option of setting patient risk level manually within the patient file.



4.7.3 REQUEST VIDEO CONSULTATION



Patients can request a video consultation once completing the questionnaire. Providers can set available hours for video consultations and Core Mobile's intelligent scheduling system will automatically schedule the appointment pending provider approval.

To avoid request inundation, requests are pushed to providers based on patient risk level.

4.7.4 AUTOMATED REFERRALS

Upon completing the questionnaire, CoreyPatient™ directs patients to appropriate experts based on responses, automating the referral process. This allows the right provider to monitor patient progress for the best possible care.

4.7.5 CRISIS LINE

If a patient is experiencing an emergency, CoreyPatient™ directs patients to a crisis line where they can receive immediate attention, connecting patients with immediate care and preventing provider overwhelm.



4.7.6 LIVE VIRTUAL / VIDEO SESSIONS



If patients require further monitoring and treatment after screening, live virtual sessions can be scheduled and conducted from within the application through Core Mobile's embedded video/voice calling capability.

Particularly during a pandemic, virtual screening and treatment are an essential part of the continuity of patient care and maintaining patient wellbeing.

5. CORE MOBILE FOR SUICIDE REDUCTION

Every 12 minutes, someone dies from suicide. [6] The rate of suicide has been increasing every year since 1999 [7] and is the 10th leading cause of death in the United States.[8] Suicide is the leading cause of death for people ages 10-24. [9]

The causes of suicide are myriad and include social, biological, environmental, and cultural factors. As such, the solution is multi-sectional, bringing together multiple stakeholders.[10] Isolation, job loss, and economic downturns all contribute to suicidal thoughts, making COVID-19 an especially critical time for those at risk for suicide.

The Core Mobile Virtual Mental & Behavioral Health solution provides a suite of applications through which multiple stakeholders- care providers, the patient, family, and the public- can engage in patient care and recovery. The mobile and web app for patient and provider use includes several capabilities that are particularly well-suited for suicide prevention.

5.1 PATIENT EDUCATION

One of the cornerstones of suicide prevention is to educate the public on signs of suicide, what to do when you or someone you know is suicidal, and where to get help.

Core Mobile's solution provides comprehensive patient education on suicide prevention for patients and the public. The mobile application pushes new information, updates, and notifications straight to the patient's phone for immediate access.

5.2 TWO-WAY MESSAGING

Patients can message their provider at any time with voice, text, voice-to-text, picture and video messaging. Patients can message their provider at any time and providers can respond at their convenience.

5.3 CRISIS-LINE

There are times when immediate assistance is required for those struggling with suicidal thoughts or those who are caring for a loved one with suicidal thoughts. At those times, users can contact the National Suicide Prevention Lifeline with just one touch. The application will immediately call the Suicide Prevention Lifeline so that the patient can get the attention required instantly.

5.4 AUTOMATED EMPATHY CARE

Suicide prevention doesn't stop after meeting with a provider. It is ongoing and requires follow-up care.

Healthcare providers are overwhelmed with the number of patients that they treat. Follow-up treatment can be vital when it comes to suicide prevention and providers need a way to follow-up on patients that won't add to their burden.

Core Mobile sends out automated empathy messages to patients to check on their progress, state of mind, and overall well-being.

If Core Mobile's intelligent software flags a patient, the provider is notified. The patient list is continuously updated based on risk level after every patient input.

5.5 AUTOMATED SURVEYS

Automated surveys sent to a patient's phone throughout the period of suicide risk, help providers assess patient risk level. Patients at high risk for suicide are automatically filtered to the top of the patient list, accomplished through Core Mobile's intelligent risk assessment.

5.6 CHECKLISTS

Core Mobile helps keep patients on track by sending customizable and automatic checklists straight to their phone through the patient application. This helps patients to keep track of their treatment plan.

5.7 AUTOMATED REMINDERS

Ensuring patient compliance with treatment is an important part of success with mental health and suicide prevention.

Reminders are automatically pushed to patients through the patient application to ensure patients complete checklist items and respond to surveys.

5.8 AUTOMATED REPORTED WARNING SIGNS

Core Mobile allows for customizable mental state questions to be pushed to patients by the provider via the mobile application. All patient inputs are collected in the Core Mobile software, after which the patient's mental state is assessed for early signs of suicide risk. This is then pushed to providers who can follow-up with patients at the highest risk.

5.9 RISK ASSESSMENT

Core Mobile's intelligent software correlates responses to mental state questions, surveys, along with past EHR and DSM5/PCL-5/ICD-10 diagnosis, with Veteran's scores on Suicide Assessment Scale in order to automatically list patients according to risk level for providers. This helps providers reach patients most at risk, the most rapidly, assisting with prioritization of care.

6. CLINICAL FEATURES

Core Mobile's screening tool includes the following functionality:

1. Questions and Answers drawn from best practices and standard behavioral health assessment tools for each of the areas of diagnosis including but not limited to:
 - BPRS/BIMS for general symptom inventory and establishing baseline further enhanced by Safety and MMSE
 - BDI for depression followed by PHQ-9 plus capture potential risk of suicide
 - MDQ for bipolar disorder plus safety check (after initial baseline)
 - BPRS for schizophrenia plus safety check (after initial baseline)
 - BPRS for psychosis plus safety check (after initial baseline)
 - CAPS for PTSD
 - BAI/GAD for anxiety disorders
 2. Leverage open source tools to adjust the standard questionnaires and decision trees to refine the classification, care pathway selection and referral to mental health professionals.
 3. Specify rules for elimination of duplication of questions in software based on responses received from patients taking the questionnaire.
 4. Specify the decision engine to probable diagnosis of the following areas,
 - Depression
 - Bipolar disorder
 - Schizophrenia
 - Psychosis
 - PTSD
 - Anxiety Disorders
-

5. Design specifications available in English and Spanish
6. Design specifies the path for the tool to result in local mental health resource information based on diagnosis and location (GPS location of mobile device and address in the system) of the patient taking the questionnaire with additional capability to find resources in a different zip code.
7. Design specifies the generation of description of diagnosis with informative information for use by mental health resource. Further, the design will specify the subset of such description that may be shown to patient.

7. THE FUTURE

The Core Mobile patient app as used today is for screening and monitoring. It is also possible to extend the patient app for use as a digital therapeutic device. This will require FDA approval and is likely to be started later this year.

8. CONCLUSION

Core Mobile, Inc.'s suite of applications for patients and providers have the ability to solve some of the biggest challenges to mental health treatment and care. Patients can now enjoy convenient, remote access to care while providers can increase patient throughput and improve patient outcomes.

By leveraging mobile devices, artificial intelligence, and predictive analytics, Core Mobile brings patients and providers a solution to transform mental health care and improve patient outcomes.

*"Core Mobile's solutions are designed to seamlessly integrate with the workflow at care facilities and into the lives of patients so that people can get the care they need, right when they need it. **Core Mobile solutions are VHA approved and leveraged at select VA facilities**, making them a trusted solution for modern health care and mental health challenges. **We believe in increasing access to care for all patients, our technology makes that possible.**"*

- Chandra Tekwani, Core Mobile, Inc. Founder & CEO

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Learn More

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About Core Mobile, Inc.:

Core Mobile, Inc. leverages the power of mobile, real-time data, AI, and machine learning to maximize workflow efficiency, patient engagement, and patient outcomes. Since 2011, Core Mobile has been developing solutions to improve access to care and modernize healthcare for improved patient outcomes.