



## THE MONSENSEN MHEALTH SOLUTION FOR MENTAL ILLNESSES

The Monsenso mHealth solution for mental illnesses is a Class I CE-marked medical device, which have been technically and clinically validated in a range of clinical pilot studies and randomised controlled trials (RCTs).

### PATIENT-ORIENTED CLINICAL OUTCOMES

- High compliance rate to daily self-assessments (87-93%)
- Considered very useful by patients and clinicians
- Very user-friendly
- Helps patients cope with their illness
- Optimises patient treatment

### TECHNICAL OUTCOMES

- Stable and scalable
- Minimal battery consumption on a smartphone
- Generates an accurate correlation analysis
- Provides a Mean Absolute Error (MAE) in mood forecast between 0.06 and 0.82 ( $\pm 3$  mood scale)

### CLINICAL OUTCOMES

- Self-assessed symptoms have a high correlation with clinical assessments
- Automatically collected sensor data has a high correlation with clinical assessments of symptoms
- Can be used as a possible biomarker for mental disorders

### SUPPORTING A BETTER TREATMENT

Monsenso helps clinicians bring better treatment to more people at a lower cost. Our mission is to help healthcare providers, carers and individuals overcome the burden of mental illness. Based on continued research and development, we are committed to developing solutions that fit seamlessly into the lives of individual, while increasing the efficacy of their treatment.

### INDIVIDUALS

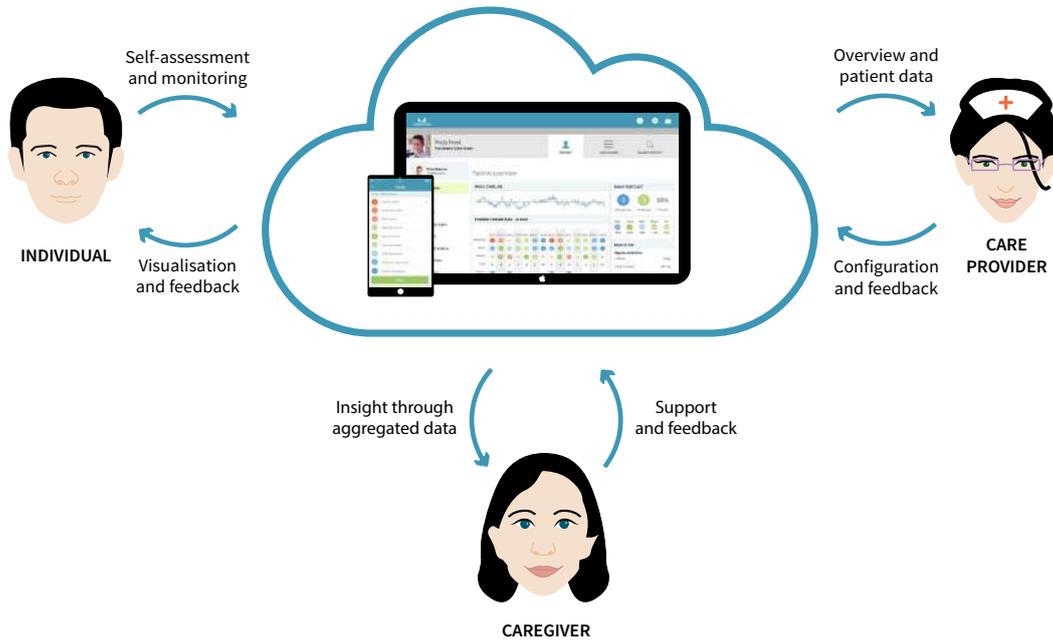
Individuals use a smartphone app that collects important health-related data. Through the app, they are prompted to fill in personalised self-assessments and clinical questionnaires. Additionally, the smartphone also collects sensor data, such as physical activity, mobility, and phone usage. The Monsenso smartphone app can also help patients identify triggers, early warning signs, and gain insight into their illness. In the case of an emergency, patients can access customised action plans that assist them to cope with their symptoms.

### CARERS

Family carers use a similar smartphone app which allows them to play a more active role in their relative's treatment, while obtaining the information they need. With the smartphone app, caregivers can rate their relative's mental health state, and make notes that are shared with both the patient and the healthcare providers. The smartphone app also allows caregivers to obtain an overview of their relative's symptoms, monitor their progress and help them spot potential relapse risks in time.

### HEALTHCARE PROVIDERS

The Monsenso mHealth solution enables healthcare providers to access the information collected by the patients' and caregivers' smartphones. The clinical web portal provides historical information on each patient, including routine self-assessments and clinical questionnaires. Additionally, clinicians can obtain an overview of their patients' illness progression, their symptoms, medication compliance, and medical record keeping. The web portal also notifies clinicians when patients display any triggers or warning signs, enabling them to monitor each patient remotely, and intervene at an early stage. The technology used to collect and analyse patient data provides clinicians with an insight into the correlation between a patient's behavioural patterns and the illness, enabling them to provide a more efficient treatment.



**PATIENT SMARTPHONE**

- Patient self-assessment
- Data collection sensors
- Tracks early warning signs
- Tracks medication compliance
- Visualisations
- Motivating feedback



**BIG DATA ANALYSIS**

- Historical aggregation of data
- Statistical descriptors
- Risk assessment
- Correlation analysis\*
- Pattern recognition\*
- Illness prediction and forecasting\*



**CLINICAL WEB PORTAL**

- Clinical dashboard
- Identification of warning signs
- Overview of historical data
- Correlation analysis and illness forecast\*
- Medication management
- Medical record keeping

\*Only for research purposes

**WHAT USERS SAY**

*“The system is a great tool to treat patients! It provides me with more insights on how a patient is feeling and it supports a much faster intervention.”*

- Nurse

*“The system helps me to become more aware of the things that affect my condition and it helps me to have a more stable life.”*

- Patient

*“Now, our conversations are facilitated by data in the system. This is especially useful with patients who have a hard time talking about their experiences.”*

- Nurse