

Hack & Heal Hackathon
Healthcare Topic / Janssen

**WHAT TECHNOLOGICAL SOLUTION CAN HELP THE
EARLY DETECTION OF DEPRESSION AND TO ENSURE THAT
PATIENTS RECEIVE THE APPROPRIATE TREATMENT FOR THEIR CONDITION?**

WE ARE LOOKING FOR A TECHNOLOGICAL SOLUTION(S) THAT HELP(S):

- 1) the person concerned, the family or the environment to recognize the need for medical help because of suspected depression
- 2) the GP to use simple tests to identify depression and refer the patient to a psychiatrist
- 3) facilitate live communication between hospital - psychiatric outpatient clinic - general practitioner about the patient
- 4) the patient stays in the health care system and does not stop therapy prematurely (doctor-patient communication, patient follow-up, patient education)

Major depression is a disease that often directly threatens not only the quality of life, but also life itself, and can affect up to 600,000 to 700,000 people in Hungary every year.

Depression can affect anyone. Men and women can equally suffer from depression, regardless of age, education, social and economic background.

There are several interrelated factors to account for the development and persistence of depression, such as:

- genetic factors (family history: was/is there a family member suffering of depression?),
- hormonal changes (age, e.g. menopause),
- certain diseases,
- long-term stress,
- difficulties in life.

The symptoms of depression are very intense, causing the patients considerable suffering. The ability to feel pleasure is lost, the patients feel persistently depressed, their motivation for all kinds of activities is reduced, feelings of worthlessness and guilt emerge, accompanied by frequent suicidal thoughts and attempts, and often even a wide range of physical symptoms develop as well. The patients are partially or entirely limited in performing their everyday activities. Due to the damages affecting the network of relations, the patients' environment also suffers. Family life, taking care of children, marriage, relationships, friends, work, education, career and finances - all areas of life are threatened by depression.

Unrecognized or untreated depression can often return after the first episode and may become persistent or chronic. **Untreated depression can result in a negative spiral;** leading to reduced productivity, long-term unemployment, disability, inability to care of themselves, or even suicide at

the "end" of the spiral. International and national research suggest that 15-19% of untreated major depression patients die by suicide.

Depression can be treated effectively: as many as 80-90% of people with depression, who are treated actually feel better after 3 to 8 weeks. **However, nearly half of depressed people do not receive the right treatment.** Among other things, this happens because:

1. **Many patients do not seek help**

- as they do not realize they are ill, they do not recognize the signs and symptoms signaling that something is wrong with them.
- for the fear of stigma, believing that depression is nothing more than a personal weakness or character flaw.

A number of self-administered questionnaires are available to patients and their relatives to check for the main symptoms of depression. The result of the test may be indicative, but it does not necessarily mean that a diagnosis of depression has been established. Only a specialist can confirm the diagnosis.

2. **Depression is not recognized.**

Depression still often remains unrecognized. In many cases, the patient seeks help because of physical symptoms and the GP/specialist sometimes does not consider the possibility of depression when focusing only on physical complaints. As a result, the patient may not receive the appropriate treatment.

3. **The GP plays a major role in the recognition of major depression, being the first person to whom the patients turn to.** A skilled GP can significantly improve the patient's condition, quality of life, and reduce the number of completed suicides and suicide attempts.

a) **GPs screen for and can recognize depression**

- **There are 2 tests available to GPs to detect depression and to assess its severity, although they are not yet used as a routine and/or widespread in practice.**
 - Short Beck Depression Inventory
 - Short Beck Hopelessness Scale

b) **depending on the patient's condition GPs can refer patients to a specialist if depression is suspected,**

- patients are referred to a specialized psychiatric outpatient clinic, care center or hospital ward or, in some cases, to an emergency department

c) **GPs can keep the patient in their care in the long term, ideally in collaboration with a psychiatrist.**

- A challenge in the treatment of depression is that **many patients "drop out" of the care system and stop receiving treatment.**

This could be improved through effective follow-up, which requires the development of

- **doctor - doctor communication between various care providers: GP - psychiatry nurse/specialist - hospital ward**
- **doctor - patient communication.**

<https://ifightdepression.com/hu/start>

<https://www.breakingdepression.eu/>

<https://wordstoaction.eu/>

<https://www.nhs.uk/mental-health/conditions/clinical-depression/living-with/>

