Explaining the issue

Digital opportunities for mental health care

About half of the Norwegian population suffers from some sort of mental illness or ailment during their lifetime. The coronavirus pandemic has led to an increase in incidences of anxiety and depression. As many as 45 per cent of the country's students have said that they are experiencing considerable mental health problems, up from 32 per cent in 2018.

The Government is keen to boost mental health in public health work. With effect from 1 January 2020, it became a requirement to have psychologists in all of Norway's municipalities. The number of municipal psychologist man-years has increased significantly since 2015.

Long waiting lists and a lack of resources and municipal services mean that many people do not obtain the help they need. Studies show that the majority of people displaying symptoms of anxiety or depression do not seek help for their problems.

Digital tools can increase capacity, lower the threshold and contribute towards better mental health care.

NEW TOOLS

Smartphones have provided us with mobile health services, such as tests, diagnoses, treatment and guidance. There are many options for mental health contingencies as well.

Lowering the threshold with video consultations
The use of digital consultations (video, audio and text) for mental health issues has doubled in Europe as a result of the coronavirus outbreak. Patients can receive help from their homes, thus saving money and reducing the time they spend travelling. It may be easier to get in touch, but this is conditional on having privacy at home. Video calls do not result in any significant increases in treatment capacity, but each psychologist is able to cover a larger area.

Online treatment with the same quality Online consultations allow patients to complete various tasks online. Patients and psychologists do not need to be present at the same time, but they can respond to and review patients' submissions at their convenience. In cases of depression this can result in the same reduction of symptoms as that which would have been achieved with a face-to-face consultation. At the same time, psychologists can treat three times as many patients, according to the Norwegian eMeistring project.

DIGITAL MENTAL HEALTH CARE

» Makes use of videos, Internet processing, sensors and virtual assistants

» Can lower the threshold for users, increase capacity and improve services

» Requires quality assurance and incentives if it is to include front line treatment

Sensors for continuous follow-up
Emotions trigger physical reactions in the body that can be measured by using sensors. For example, changes in one's heart rate, movements, voice usage and typing speed can reveal changes in one's state of mind. By analysing sensor data it is possible to detect signs of mental disorders at an earlier stage, provide users with continuous follow-up and help them to manage their own condition.

The INTROMAT research project being conducted at Haukeland Hospital is using activity bracelets to detect changes in subjects' state of mind in cases of bipolar disorder. The data is interpreted by using machine learning, and the subjects are told when they are about to have a depressive episode.

Self-help with virtual assistants
There are a large number of apps that offer various forms of mental health care. Some of these connect users to a psychologist while others are fully automatic. These are called virtual assistants or chatbots. Some examples include Woebot, Replika and the Norwegian Co-mestring.

These virtual assistants help users to understand and improve their own health situation. The apps are easy to use, accessible, and can reduce the threshold for seeking help. Self-help apps like these can significantly increase treatment capacity because they do not require direct patient contact.

Virtual reality in exposure therapy
By using audio and video, preferably with glasses that can create a 3D effect, users can enter a digital, simulated environment in order to practice responding to different situations. This technology

is showing promising results for application in mental health care, e.g. in the treatment of psychoses or phobias.

A DIGITAL FRONT LINE

In order to obtain a referral to a psychologist, patients currently have to approach their GP first. This threshold can be perceived as being high. Furthermore, over one in five patients are rejected when they are referred for further help in the specialist health services.

A digital mental health first line of treatment may be offered in addition to more traditional offers. It can provide greater access to help, lower the contact threshold, reduce geographical differences and increase capacity. Many of the tools used for achieving this are already in place in Norway and several projects have been set in motion. For example, the Norwegian Directorate of Health is developing first line treatment for young people, called DIGI-UNG.

The eMeistring treatment software is aimed at adults, but it is only available in some regions. This software takes users through individual online screening and offers online consultations for some mental disorders. Establishing a nationwide digital service would be a natural aim, with access to several different tools.

Positive experiences from Australia

In Australia, as early as 2013, the government established a national digital mental health platform. The Australia MindSpot Clinic provides information, self-help software and online consultancy. This online clinic also offers free, anonymous assessment and treatment for adults who are experiencing stress, anxiety, depression or chronic pain. The point of entry is a 20-minute self-assessment process.

A 2020 assessment showed that two out of three visitors were primarily seeking information or an anonymous assessment of their symptoms, something which is valuable in its own right. Those people who also received online consultations experienced significant reductions in their symptoms. The study concluded that such solutions should be a component of the modern health care system.

DISTRIBUTION OF QUALITY SOLUTIONS

There are currently at least 10,000 mental health-oriented apps available on the Internet. A study of 300 apps available in the Apple App Store and Google Play showed that only 1 per cent of these had independent research documenting the effects.

Although high levels of innovation and distribution are desirable, the solutions offered to patients should be of high quality. A new EU regulation that came into force in May 2021 could mean stricter requirements for some apps, since more of them are starting to be regarded as being medical devices.

Prescription apps

The Norwegian Directorate of Health is working on a framework for quality assurance of digital health tools. Both citizens and healthcare personnel should know what works and what is safe to use. In the short term it has been suggested that a library of quality assured tools should be created.

In the long term, the Directorate envisages that doctors will be able to write prescriptions for apps. If use of these apps receives full or partial public funding, this will provide financial incentives for developing high quality apps. The question is whether "long term" is a high enough level of ambition, given the mental health challenges present.

A scheme for app prescriptions was established by Germany in 2019. Health insurers, who cover the health costs of the majority of Germany's population, have to pay for the use of prescription apps. Two mental health apps were recently approved under this scheme.

In addition, app approval, testing, piloting, and evaluation have become more flexible. This has also been observed in the USA where the health authorities (FDA) have put in place new schemes for approving digital mental health treatment as a direct result of the ongoing pandemic.

Better privacy

The use of digital treatment software, sensors or apps requires access to sensitive data about the mental health of individual patients. Data security and the use of data are crucial for ensuring confidence.

In Finland, data security was compromised when hackers accessed the records of the country's largest digital psychology service and used them for extortion purposes.

Other data leaks are intentional. A review of mental health apps showed that 92% of those concerned sent data to third parties such as Facebook and Google for use in data analysis or marketing.

Major technology companies have definite plans for the health sector. Both Google and Amazon are focusing on smart bracelets that can record activities and, in Amazon's case, also measure mood swings based on voice recognition.

By collocating such data with everything they already know about their users, they can form a detailed picture of users' current and future mental health. This places users in a vulnerable situation. Consequently, the regulations and enforcement regarding using and sharing such data needs to be tightened up if we are to maintain confidence in digital health services.

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