

Addiction medicine: contact-free recording of adherence to therapy

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Berlin – The coronavirus crisis has increasingly moved telemedical applications to the focus. Addiction treatment is also seeing an increase of relevance among the contact-free treatment options, even though its scope remains behind that of other healthcare areas.

In particular the pandemic has shown the necessity of telemedical offers for vulnerable groups such as addicts. Many of them are high-risk patients due to underlying conditions such as HIV and HCV, but also lung diseases.

The urine marker technology that allows patients to provide urine samples without therapist contact is an option for contact-free recording of adherence in addiction therapy.

Generally, this is about telemetric recording of PEG capsule intake using mobile phones with an integrated camera. Direct contact with the therapist is only necessary for initialisation. The subsequent urine controls can be done with capsules being mailed by the doctor to the patient, and urine samples by the patient to the lab.

RUMA GmbH developed the “RUMA digital” application before the pandemic already. Its original target group included patients in rural areas, with partly considerable spatial distances from the examination facilities.

In order to record and support therapy adherence without any risk of infection, however, the procedure is suitable for a wider patient base within the context of the SARS-CoV-2 crisis as well.

During the first direct contact between the attending doctor's practice and the patient, the associated app will be installed on the patient's smartphone. The patient will be trained in handling as well as in the temporal sequences of the system. The practice will also take a current facial photograph of the patient to permit assignment of the subsequent video recordings of marker intake to the respective person.

Then the first urine markers to be used will be handed over. They are applied with outer and inner barcodes that will prevent manipulation later within the scope of a video recording before the actual marker intake.

Advance removal or exchange of the marker would damage the barcodes, rendering proper video recording of intake impossible. This means that the PEG marker can only be taken by the patient, which prevents the submission of another person's urine.

The marker must be taken within a time window of no more than 120 seconds. The patient will swallow the marker, chew the enclosed acidic drop to stimulate salivation, and then present their tongue with the mouth opened. If they try to store the capsule in an oral pocket for later removal, the quickly dissolving capsule hull will release a dye (blueberry extract) that will turn the entire oral cavity blue.

Finally, the video will be sent to the attending medical practice encrypted. The patient will be informed of successful completion of the process or of any issues in transmission.

So far, the system has been tested in two German centres: the Fachklinik Ludwigsmühle and the Praxis für Psychiatrie und Psychotherapie Landau, in cooperation with A-Clinic Ltd in Finland.

According to the partners involved, the procedure has the advantage of doing without the intimacy-violating visual inspection, strengthening the patients' responsibility, and minimising time lost by potentially long paths to and from the supporting centres. The medical staff also profits from the time saved. © EB/kk/aerzteblatt.de

(Translation provided by Ruma GmbH)