

Claims

1. A system comprising:

data processing hardware;

memory hardware in communication with the data processing hardware, the memory hardware storing instructions that when executed on the data processing hardware cause the data processing hardware to perform operations comprising:

executing a prescription digital therapeutic configured to treat symptoms associated with opioid use disorder in a patient, wherein executing the prescription digital therapeutic comprises:

receiving a plurality of inputs associated with the patient from one or more of (i) first sensors associated directly with the patient and (ii) second sensors associated with a patient electronic device, wherein the plurality of inputs represent a current state determination of the patient corresponding to a level of opioid withdrawal associated with the patient;

weighting the plurality of inputs associated with the patient to provide a plurality of weighted inputs; and

determining a recommended dosage of a buprenorphine-containing product for the patient based on the plurality of weighted inputs, the recommended dosage of the buprenorphine-containing product being greater than a default dosage when the current state determination associated with the patient is negative and less than the default dosage when the current state determination associated with the patient is positive; and

an administration unit that administers the recommended dosage of the buprenorphine-containing product to the patient.

2. The system of claim 1, wherein the prescription digital therapeutic is configured to implement cognitive behavioral therapy to treat the symptoms associated with the opioid use disorder.

3. The system of claim 1, wherein the first sensors associated directly with the patient comprise one or more of: (i) a heart rate monitor, (ii) a blood pressure monitor, (iii) a sleep monitor, (iv) an electrodermal activity monitor, (v) a skin temperature sensor, and (vi) a sweat monitor.

4. The system of claim 1, wherein the second sensors associated with the patient electronic device comprise one or more of: (i) an accelerometer, (ii) a proximity sensor, and (iii) an activity monitor.

5. The system of claim 1, wherein weighting the plurality of inputs associated with the patient comprises assigning a first weight to a first input of the plurality of inputs and a second weight different than the first weight to a second input of the plurality of inputs.

6. The system of claim 5, wherein the first input of the plurality of inputs includes the first sensors associated directly with the patient and the second input of the plurality of inputs includes the second sensors associated with the patient electronic device.

7. The system of claim 6, wherein the first weight is greater than the second weight.

8. The system of claim 1, wherein the administration unit comprises one or more of: (i) a delivery pump, (ii) an injection unit, (iii) an implant, (iv) an oral absorption unit, (v) an inhaler, and (vi) a nasal injector.

9. A method comprising:

executing a prescription digital therapeutic configured to treat symptoms associated with opioid use disorder in a patient, wherein executing the prescription digital therapeutic comprises:

receiving, by data processing hardware, a plurality of inputs associated with the patient from one or more of (i) first sensors associated directly with the patient and (ii) second sensors associated with a patient electronic device, wherein the plurality of inputs represent a current state determination of the patient corresponding to a level of opioid withdrawal associated with the patient;

weighting, by the data processing hardware, the plurality of inputs associated with the patient to provide a plurality of weighted inputs; and

determining, by the data processing hardware, a recommended dosage of a buprenorphine-containing product for the patient based on the plurality of weighted inputs, the recommended dosage of the buprenorphine-containing product being greater than a default dosage when the current state determination associated with the patient is negative and less than the default dosage when the current state determination associated with the patient is positive; and

an administration unit that administers the recommended dosage of the buprenorphine-containing product to the patient.

10. The method of claim 9, wherein the prescription digital therapeutic is configured to implement cognitive behavioral therapy to treat the symptoms associated with the opioid use disorder.

11. The method of claim 9, wherein the first sensors associated directly with the patient comprise one or more of: (i) a heart rate monitor, (ii) a blood pressure monitor, (iii) a sleep monitor, (iv) an electrodermal activity monitor, (v) a skin temperature sensor, and (vi) a sweat monitor.

12. The method of claim 9, wherein the second sensors associated with the patient electronic device comprise one or more of: (i) an accelerometer, (ii) a proximity sensor, and (iii) an activity monitor.

13. The method of claim 19, wherein weighting the plurality of inputs associated with the patient comprises assigning a first weight to a first input of the plurality of inputs and a second weight different than the first weight to a second input of the plurality of inputs.

14. The method of claim 13, wherein the first input of the plurality of inputs includes the first sensors associated directly with the patient and the second input of the plurality of inputs includes the second sensors associated with the patient electronic device.

15. The method of claim 14, wherein the first weight is greater than the second weight.

16. The method of claim 9, wherein the administration unit comprises one or more of: (i) a delivery pump, (ii) an injection unit, (iii) an implant, (iv) an oral absorption unit, (v) an inhaler, and (vi) a nasal injector.
17. The system of claim 1, wherein the default dosage of the buprenorphine-containing product is 4 mg.
18. The system of claim 17, wherein when the current state determination associated with the patient is negative, the recommended dosage of the buprenorphine-containing product is an additional 4 mg.
19. The method of claim 9, wherein the default dosage of the buprenorphine-containing product is 4 mg.
20. The method of claim 19, wherein when the current state determination associated with the patient is negative, the recommended dosage of the buprenorphine-containing product is an additional 4 mg.