SYSTEMS AND METHODS OF TREATMENT USING INTERVENTION AND TASKING DETERMINATION

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims the benefit of priority to U.S. Provisional Application No. 61/880,785, filed on September 20, 2013, the entire contents of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

[0002] The present invention generally pertains to treatments utilizing administration of pharmaceutical or other therapeutic compounds.

[0003] While medical treatments utilizing administration of pharmaceutical or therapeutics are widespread, the effectiveness of a given treatment may vary widely from patient to patient. Even when the efficacy of a given treatment has a high degree of predictability in most patients, the success of treatment may still vary considerably based on the patient's compliance with the prescribed treatment as well as the ability of the physician to prescribe an appropriate treatment regimen for a given patient. These difficulties can become even more problematic when the effect of a treatment and associated pharmaceutical or therapeutic is less predictable, varying considerably between patients.

[0004] Given the complexities and challenges posed by conventional approaches to treatments utilizing administration of pharmaceuticals, there exists a need for methods of treatment that provide improved patient outcomes and patient compliance. There further exists a need to provide improved management and administration of such treatments.

BRIEF SUMMARY OF THE INVENTION

[0005] ~~The~~Embodiments of the present invention generally pertains to treatments utilizing administration of pharmaceutical or other therapeutic compounds. In particular, embodiments of the invention pertains to methods of managing such treatments by identifying suitability of interventions and tasking an individual or entity with the intervention to improve patient compliance, treatment outcomes or other desired result.

[0005a] In a first aspect of the present invention, there is provided a system for managing a drug treatment utilizing administration of a drug to a patient, the system comprising: a database configuration that stores a relationship between differing fields of information stored on multiple differing information systems accessed by the system, the one or more fields of information including any of a patient identifier, patient characteristic, a treatment regimen, refill history, copay information, physician information, transaction date, insurance/health plan information, location information, geographic information, symptom reporting, patient or physician communication, or any combination thereof; one or more servers on which the relational database resides; wherein the system further comprises a processing unit having instructions recorded on a memory, the instructions configured to: access and relate any of the one or more fields of information or any combination thereof to a desired result; determine an intervention based on a relationship between the one or more of the fields of information and a desired result; and task the intervention by outputting an intervention alert to one or more electronic devices to facilitate the desired result.

[0005b] In a second aspect of the present invention, there is provided a method of managing a drug treatment using an information system having a relational database, the method comprising: accessing a plurality of fields of information relating to a patient or treatment from a plurality of different information systems on which the plurality of fields of information are stored; relating the fields of information of the plurality using a relational database of the system and determining an intervention based on the relationships of the fields of information of the plurality to facilitate a desired result; determining a plurality of tasks associated with the intervention with the system; and performing and/or tasking the plurality of tasks to multiple different entities according to a particular sequence and/or timing.

WHAT IS CLAIMED IS:

1. A method of treatment using a drug protocol with a system having a relational database and being coupled to one or more electronic devices, the method comprising:

accessing one or more fields of information from a plurality of differing information systems accessible by the system, wherein the plurality of fields of information includes any of a patient identifier, patient characteristic, a treatment regimen, refill history, copay information, physician information, transaction date, insurance/health plan information, location information, geographic information, symptom reporting, patient or physician communication, or any combination thereof;

determining with the system an intervention based on a relationship between the one or more of the fields of information and a desired result and determining a plurality of tasks for addressing the intervention; and

tasking the intervention by performing and/or tasking the plurality of tasks by outputting an intervention alert or information communication to one or more different entities with the one or more electronic devices to facilitate the desired result.

2. The method of claim 1, wherein the plurality of tasks are determined by the system to be performed according to a particular sequence and/or timing.

3. The method of claim 2, wherein tasking the intervention comprises tasking the plurality of tasks to different entities according to the particular sequence and/or timing.

4. The method of claim 1, wherein tasking the intervention comprises coordinating performance of the tasks by receiving information and/or a confirmation regarding a first task of the plurality before tasking a second task of the plurality.

5. The method of claim 1, wherein the intervention corresponds to a change in treatment determined by the system based on information received by the system in one or more tasks of the plurality.

6. The method of claim 1, wherein the plurality of differing information systems include a pharmacy information system and a first task of the plurality comprises follow-up blood work, wherein the intervention comprises placing a hold on a prescription of a drug associated with the treatment by the system by outputting a communication to the pharmacy information system until information regarding the first task is received by the system.

7. The method of claim 6, wherein the hold on the prescription is removed by the system based on information received regarding the first task, wherein the information corresponds to a follow-up laboratory result of the patient.

8. The method of claim 6, wherein the drug comprises glucocorticoid receptor anatagonists.

9. The method of claim 1, wherein tasking the intervention comprises identifying an individual, position, or computer device to perform the intervention.

10. The method of claim 1, wherein the desired result is associated with any of patient compliance, treatment efficacy, patient outcome, a regulatory process, and a business or administrative process or any combination thereof.

11. The method of claim 1, wherein the one or more computerized devices receiving the intervention alert output comprise a phone, a mobile personal device, a user interface terminal or any combination thereof.

12. The method of claim 1, wherein the alert output comprises an electronic communication, indicator or combination thereof.

13. The method of claim 1, wherein the intervention comprises an automated task performed by the one or more computerized devices.

14. The method of claim 1, wherein the intervention alert is output to one or more computerized devices associated with the patient or a patient advocate.

15. The method of claim 1, wherein the intervention alert is output to one or more computerized devices associated with a treating physician, medical facility, medical administrator, insurer, or any combination thereof.

16. The method of claim 1, wherein outputting the intervention alert comprises identifying an intended recipient of the intervention alert

~~and assigning a task to the intended recipient.~~

~~17. The method of claim 9, wherein the intended recipient is a pharmacist and the assigned task comprises contacting the patient's physician to assess/manage/update the treatment regimen.~~

~~18. The method of claim 9, wherein the intended recipient comprises a manufacturer representative and the task comprises contacting the physician to discuss information relating to the drug protocol or treatment regimen.~~

~~19. The method of claim 9, wherein the intended recipient is a third-party associated with a program specific to the patient and the task comprises contacting the patient to discuss/manage the treatment regimen.~~

~~20. The method of claim 9, wherein the intended recipient is an automated system and the task comprises generating a communication to the physician or patient relating to the treatment regimen.~~

~~21. The method of claim 1, wherein the drug protocol relates to steroid and/or hormone treatment.~~

~~22. The method of claim 1, wherein the drug protocol comprises administration of mifepristone.~~

~~23~~1. A system for managing a drug treatment utilizing administration of a drug to a patient, the system comprising:

a database configuration that stores a relationship between differing fields of information stored on multiple differing information systems accessed by the system, the one or more fields of information including any of a patient identifier, patient characteristic, a treatment regimen, refill history, copay information, physician information, transaction date, insurance/health plan information, location information, geographic information, symptom reporting, patient or physician communication, or any combination thereof;

one or more servers on which the relational database resides;

wherein the system further comprises a processing unit having instructions recorded on a memory, the instructions configured to:

access and relate any of the one or more fields of information or any combination thereof to a desired result;

determine an intervention based on a relationship between the one or more of the fields of information and a desired result; and

task the intervention by outputting an intervention alert to one or more electronic devices to facilitate the desired result.

~~24~~2. The system of claim ~~16~~ 1 further comprising:

a user interface communicatively coupled with the processing unit and the database configuration , the user interface configured to facilitate input of fields of information and/or an output of the intervention alert.

~~25~~3. The system of claim ~~16~~ 1 wherein the processing unit is configured to determine the relationship between the one or more fields of information or any combination thereof and the desired result by relating the fields of information with a received result.

~~26~~4. The system of claim ~~16~~ 1 wherein the processing unit is configured to relate the one or more fields of information or any combination thereof with the desired result by applying a relational algorithm input into the system.

~~27~~5. The system of claim ~~16~~ 1 wherein the processing unit is further configured to select a select one or more types of interventions and select the one or more electronic devices from a plurality of electronic devices based on the determined intervention type.

~~28~~6. The system of claim ~~16~~ 1 wherein the one or more electronic devices comprise any of a computer, a personal electronic device, a smartphone, a visual or audio indicator.

~~29~~7. The system of claim ~~16~~ 1 wherein the intervention alert comprises any of an e-mail, a text, audio or visual indicator, or any combination thereof.

~~30~~8. The system of claim ~~16~~ 1 wherein the processing unit is configured to dynamically update the one or more fields of information and/or the relational database relating the fields of information.

~~31~~9. The system of claim ~~16~~ 1 wherein the drug comprises a steroid and/or relates to a hormone treatment.

~~32~~10. The system of claim ~~24~~ 2 wherein the drug comprises mifepristone.

~~33~~11. A method of managing a drug treatment using an information system having a relational database, the method comprising:

accessing a plurality of fields of information relating to a patient or treatment from a plurality of different information systems on which the plurality of fields of information are stored;

relating the fields of information of the plurality using a relational database of the system and determining an intervention based on the relationships of the fields of information of the plurality to facilitate a desired result;

determining a plurality of tasks associated with the intervention with the system; and

performing and/or tasking the plurality of tasks to multiple different entities according to a particular sequence and/or timing.

~~34~~12. The method of claim ~~33~~-11 wherein the drug treatment comprises glucocorticoid receptors.