DIABETES MANAGEMENT SYSTEM WITH ALERT STATUS INTERFACE AND PATIENT PRIORITIZATION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 62/205,351, filed on August 14, 2015. The entire disclosure of the above application is incorporated herein by reference.

FIELD

[0002] The present disclosure relates to user interfaces supported by a diabetes management system.

BACKGROUND

[0003] Management of chronic illness, like diabetes, involves collecting and analyzing large amounts of data. Such data may be acquired from medical devices, personal healthcare devices, patient recorded information, and test results. For people with diabetes, successful management requires monitoring one's blood glucose level. As a tool for understanding changes in one's blood glucose level, a patient may access and run a variety of reports which aggregate and present diagnostic data over preset time periods, such as days, weeks, or even months. However, interfaces are needed to alert and inform a healthcare provider or a person suffering diabetes of possible harmful changes in the patient's blood glucose level.

[0004] This section provides background information related to the present disclosure which is not necessarily prior art.

SUMMARY

[0005] This section provides a general summary of the disclosure, and is not a comprehensive disclosure of its full scope or all of its features.

[0006] In one example, a computer implemented method is provided for issuing an alert regarding a glucose condition for a patient by a diabetes management system. The method includes: receiving an enquiry period within which an alert status for the patient is evaluated; retrieving glucose measurements for the patient that fall within the enquiry period from the database; for each glucose measurements that falls within the enquiry period, determining the glucose condition of the patient by comparing a given

glucose measurement to a glucose threshold; and determining, a state for the glucose condition based on an alert threshold, where the alert threshold is indicative of an acceptable range for the glucose condition. In response to the state of the glucose condition being determined as LOW state, a patient summary interface is displayed on a display, where the patient summary interface includes a first section and a second section and the LOW state indicates that the glucose condition is within an acceptable range. In response to the state of the glucose condition determined as HIGH state, the patient summary interface is displayed on the display, where the patient summary interface includes the first section, an alert section, and the second section. The HIGH state indicates that the glucose condition is outside the acceptable range and the alert status section displays an indicia of the state of the glucose condition. The indicia of the state of the glucose condition may be selected from a group consisting of a HIGH state, a LOW state, and an unavailable state, where the unavailable state indicates insufficient data is available in the enquiry period to determine the state of the glucose condition.

[0007] In one example, the first section displays the enquiry period and the second section graphically depicts the glucose measurements taken during the enquiry period. More specifically, the second section may depict the glucose measurements taken during the enquiry period as a time series on a line graph.

[0008] In some example, the alert status section displays an indicia for the state of two or more glucose conditions. By way of example, an indicia for the state of a given glucose condition on the alert status section is displayed only when the state of the given glucose condition is determined as HIGH state.

[0009] In an aspect, a computer implemented method is provided for prioritizing patients associated with a healthcare provider. The method includes: determining, by a diabetes management system, one or more glucose conditions for each patient in a plurality of patients associated with the healthcare provider, where each of the one or more glucose conditions is indicative of a glucose level of the patient and is assigned a condition weight; determining, by the diabetes management system, a state for each glucose condition associated with a given patient using an alert threshold, where each state is assigned a state weight, the alert threshold is indicative of an acceptable range for the glucose condition and the determination of a state is made for each patient in the plurality of patients; determining, by the diabetes management system, a total alert value for each patient in the plurality of patients by summing together the product of the condition weight and the state weight for each of glucose condition associated with a

given patient; and displaying, by the diabetes management system, a listing of the patients on a display of a

computing device, where the patients are arranged in accordance with the total alert value. For example, the patients in the listing of the patients may be arranged in descending order in accordance with the total alert value.

[0010] Each entry in the listing of patients may include a name for the given patient and indicia for the state of the one or more glucose conditions associated with the given patient.

[0011] In one example, the one or more glucose conditions are selected from a group consisting of hypoglycemic condition, hyperglycemic condition and a variability condition such that the value of the condition weight assigned to the hypoglycemic condition is greater than value of the condition weight assigned to the hyperglycemic condition and value of the condition weight assigned to the hyperglycemic condition is greater than the value of the condition weight assigned to the variability condition.

[0012] In some example, the state for a given glucose condition is selected from a group consisting of a HIGH state, a LOW state, and an unavailable state, where the LOW state indicates that the glucose condition is within an acceptable range, the HIGH state indicates that the glucose condition is outside the acceptable range, and the unavailable state indicates insufficient data is available in the enquiry period to determine the state of the glucose condition. In such embodiments, the value of the state weight assigned to the HIGH state is greater than the value of the state weight assigned to the LOW state, and the value of the state weight assigned to the LOW state is greater than the value of the state weight assigned to the unavailable state.

[0013] Further areas of applicability will become apparent from the description provided herein. The description and specific examples in this summary are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.

DRAWINGS

[0014] The drawings described herein are for illustrative purposes only of selected embodiments and not all possible implementations, and are not intended to limit the scope of the present disclosure.

[0015] FIG. 1 illustrates a diabetes management system in communication with multiple devices;

[0016] FIG. 2 is a functional block diagram of the diabetes management system;

[0017] FIG. 3 illustrates an example of a patient summary interface provided by the diabetes management system;