blood glucose level and time of day can be displayed if desired. When the user chooses to display a weekly trend graph (FIG. 7), the display generated by the system is similar to the display of a daily graph, having the time period displayed in conjunction with a graph that consists of lines interconnecting points that correspond to the blood glucose test results.

The screen display shown in FIG. 8 is representative of statistical data that can be determined by the system of FIG. 1 (using conventional computation techniques) and displayed in alphanumeric format. As previously mentioned, such statistical data and information in various other textual and graphic formats can be provided to a healthcare professional (60 in FIG. 2) in the form of a standardized report 56 (FIG. 1) that is sent by clearinghouse 54 to facsimile machine 55. In the exemplary screen display of FIG. 8, statistical data for blood glucose levels over a period of time (e.g., one week) or, alternatively, for a specified number of monitoring tests is provided. In the exemplary display of FIG. 8, the system (data management unit 10 or clearinghouse 54) also calculates and displays (or prints) the average blood glucose level and the standard deviation. Displayed also is the number of blood glucose test results that were analyzed to obtain the average and the standard deviation; the number of test results under a predetermined level (50 milligrams per deciliter in FIG. 8); and the number of blood glucose tests that were conducted while the user was experiencing hypoglycemic symptoms. As previously noted, in the preferred embodiments of the invention, a screen display that is generated during the blood glucose monitoring sequence allows the user to identify the blood sample being tested as one taken while experiencing hyperglycemic or hypoglycemic symptoms and, in addition, allows the user to specify other relevant information such as food intake and medication information.

The currently preferred embodiments of the invention also allow the user to select a display menu item that enables the user to sequentially address, in chronological order, the record of each blood glucose test. As is indicated in FIG. 9, each record presented to the system user includes the date and time at which the test was conducted, the blood glucose level, and any other information that the user provided. For example, the screen display of FIG. 9 indicates that the user employed handheld microprocessor unit 12 as an interface to enter data indicating use of 12.5 units of regular insulin; 13.2 units of "NPH" insulin; food intake of one bread exchange unit; and pre-meal hypoglycemic symptoms.

Use of data management unit 10 in conjunction with handheld microprocessor unit 12 also allows display (or subsequent generation of a standardized report 56) showing blood glucose test results along with food intake and/or medication information. For example, shown in FIG. 10 is a daily graph in which blood glucose level is displayed in the manner described relative to FIG. 6. Related food intake and medication dosage is indicated directly below contemporaneous blood glucose levels by vertical bar graphs.

It will be recognized by those skilled in the art that the above-described screen displays and system operation can readily be attained with conventional programming techniques of the type typically used in programming microprocessor arrangements. It also will be recognized by those skilled in the art that various other types of screen displays can be generated and, in addition, that numerous other changes can be made in the embodiments described herein without departing from the scope and the spirit of the invention.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A self-care health monitoring system comprising:

a programmable microprocessor-based unit, said programmable microprocesses-based unit including a display screen and a plurality of switches, said microprocessor-based unit including a receptacle for receiving a program cartridge that includes a memory circuit having stored therein program instructions for controlling the operation of said programmable microprocessor-based unit;

monitoring means operable for sensing a condition indicative of a person's physical well-being and for producing digitally encoded signals representative of said condition; and

a microprocessor-based data management unit connectable in signal communication with both said programmable microprocessor-based unit and said monitoring means, said microprocessor-based data management unit including a central processing unit and a memory circuit, said memory circuit for storing program instructions for controlling the operation of said central processing unit, said central processing unit being responsive to program instructions stored in said memory circuit of said microprocessor-based data management unit for processing said digitally encoded signals supplied by said monitoring means that are representative of said sensed condition, said central processing unit of said data management unit supplying signals representative of said sensed condition to said programmable microprocessor-based unit in response to digitally encoded signals that are supplied to said data management unit by said programmable microprocessor-based unit upon selective operation of at least one of said switches of said programmable microprocessor unit.

2. The self-care health monitoring system of claim 1 wherein said programmable microprocessor-based unit is a compact video game system.

3. The self-care health monitoring system of claim 2 wherein said central processing unit of said microprocessor-based data management unit causes said signals representative of said sensed condition to be stored in said memory circuit of said data management unit; and wherein said data management unit further includes a modem for transmitting said stored digitally encoded signals representative of said sensed condition to a remotely located healthcare professional.

4. The self-care health monitoring system of claim 3 further comprising a clearinghouse facility for receiving said signals supplied via said modem of said microprocessor-based data management unit, said clearinghouse facility being remotely located from said microprocessor-based data management unit and including digital signal processing means for converting said digitally encoded signal supplied via said modem of said microprocessor-based data management unit into a report that provides information relating to said condition sensed by said monitoring means, said signal processing means of said clearinghouse facility for transmitting a facsimile signal representative of said report to said remotely located healthcare professional.