

heart rate (HR), and additional data that may be useful in predictive models such as those for AMS.

[0032] In an aspect of the present invention, the system and method will provide guidance to leaders and decision-makers based on, at least (and not necessarily limited to) one or more of the following estimates: estimates of acclimatization as a function of target altitude, estimates of acclimatization status for a range of higher altitudes, and real-time estimates of the altitude acclimatization status of personnel based on their longitudinal histories.

[0033] In one aspect, the present invention provides a machine-readable medium or media having instructions recorded thereon that are configured to instruct the processor to input a regression model specification.

[0034] In another aspect, the present invention provides a method for providing decision support.

[0035] In yet another aspect, the present invention provides a computer network that includes a server computer and a server module. The server computer includes a processor and memory. The computer network also includes a first client computer, not necessarily different from the server computer. The first client computer includes a first user display device, a first user input device, and a client module. The computer network also includes a second client computer, not necessarily different from the first client computer or the server computer. The second client computer has a second user display device not necessarily different from the first user display device, a second user input device not necessarily different from the first user input device, and a second client module. The server module includes instruction code configured to (a) instruct the processor to communicate common regression models to the first client module and store regression module specification received from the first client module.

[0036] It will thus be appreciated that configurations of the present invention facilitate rapid translation of evidence-based predictive models into robust tools (for example, Web-based tools) capable of providing visual representations of predicted outcomes.

[0037] In the management of illness, for example, physicians and management personnel can get immediate probability estimates for outcomes such as acute mountain sickness, survival, frequency, or other predictive projections of illness outcomes given an initial set of parameters.

[0038] Some configurations provide a broad assortment of graphical outputs that facilitate the sharing of information with decision management personnel.

[0039] The various features of novelty that characterize the invention are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and specific objects attained by its uses, reference is made to the accompanying drawings and descriptive matter in which a preferred embodiment of the invention is illustrated.

BRIEF DESCRIPTION OF THE DRAWINGS

[0040] In the drawings:

[0041] FIG. 1 is a flowchart of one embodiment of the altitude illness decision aid module

[0042] FIG. 2 is a flowchart of an alternate embodiment of the altitude illness decision aid module.

[0043] FIG. 3 is a flowchart of one embodiment of the physical work performance decision aid.

[0044] FIG. 4 is a flowchart of an alternate embodiment of the physical work performance decision aid module

[0045] FIG. 5 is a bar graph showing the impact of increasing altitude on fixed pace performance.

[0046] FIG. 6 is a line graph showing the impact of increasing altitude on fixed relative intensity (% VO₂max) Performance for a standardized competitive event at varying altitudes.

[0047] FIG. 7 is a line graph showing the impact of increasing altitude on fixed relative intensity (% VO₂max) Performance for the performance of a foot march with combat load.

[0048] FIG. 8 is a flowchart of one embodiment of the altitude acclimatization management module.

[0049] FIG. 9 is a flowchart of an alternate embodiment of the altitude acclimatization management module.

[0050] FIG. 10 is a flowchart of one embodiment of the altitude acclimatization status calculator module.

[0051] FIG. 11 is a flowchart of an alternate embodiment of the altitude acclimatization status calculator module.

[0052] FIG. 12 is a flowchart of one embodiment of the automated altitude acclimatization status calculator module.

[0053] FIG. 13 is a line graph showing varying individual ascent profiles to 4000 m over a period of days.

[0054] FIG. 14 is a bar graph showing a cumulative altitude exposure calculation for an individual ascent profile.

[0055] FIG. 15 is a bar graph showing cumulative altitude exposure calculations (meter/days) for varying ascent profiles to 4000 m.

[0056] FIG. 16 is a line graph showing the predicted prevalence of AMS at 4000 m as a function of cumulative altitude exposure (expressed in meter-days).

[0057] FIG. 17 is a pictorial block diagram of a configuration of one embodiment of a computer network of the present invention.

[0058] FIG. 18 is an example of a display for the altitude illness decision aid system requesting parameter data.

[0059] FIG. 19 is an example of a display of the acclimatization decision aid system requesting parameter data.

[0060] FIG. 20 is a flow chart illustrating the steps in one embodiment of the method of developing a model for predicting AMS prevalence of this invention.

[0061] FIG. 21 is an example of a display for the altitude illness and acclimatization decision aid system showing a probability curve for AMS prevalence as a function of time at altitude (in hours).

[0062] FIG. 22 is an example of a display for the altitude illness and acclimatization decision aid system showing AMS symptom severity scores as a function of time at altitude (in hours).

[0063] FIG. 23 is an example of a display for the altitude illness and acclimatization decision aid system showing a bar graph that displays an estimate of the percentage of personnel that will be affected by AMS and the symptoms they may experience as a function of spending 24 hours at 3500 m.

[0064] FIG. 24 is an example of a display for the altitude illness decision aid system displaying probabilities of AMS severity based on parameter data.

[0065] FIG. 25 is a process diagram that illustrates the creation of a statistical model through the use of data collection and statistical processing, together with the prognostic use of the statistical model in evaluating new responses.

[0066] FIG. 26 shows a health care decision aid management system, in accord with one embodiment of the invention.