CLAIMS

What is claimed is:

1. A system (100) for optimizing building system control of patient rooms comprising:

at least one processor (102, 402) configured to:

determine at least one first customized environmental condition (146) for a first medical condition (130) that contributes to a positive medical outcome for the first medical condition based at least in part on environmental conditions (112) associated with each of a plurality of patient rooms (122, 124) and patient data (118) for patients in each of the plurality of rooms during time periods (138,140) for which the environmental conditions were present, wherein the patient data includes at least one medical condition (114) associated with each patient and at least one medical outcome (116) associated with the at least one medical condition;

cause a building system (126) to control an environment of a first patient room (120) to have the at least one first customized environmental condition (110) based at least in part on a determination that the first medical condition (130) for the at least one first customized environmental condition corresponds to the first medical condition (132) that is associated with a first patient (128) in the first patient room;

a plurality of sensors (212) in the plurality of patient rooms, which are operable to acquire the measurements, wherein the at least one processor is configured to determine the environmental conditions based on the measurements during time periods that the patients are in the respective patient rooms, which measurements include room temperature, light exposure, and audible sound, wherein the at least one first customized environmental condition corresponds to at least one level for at least one of temperature, light exposure, audible sound, or a combination

thereof;

wherein the building system is operable to control at least one of temperature, light, shade, sound, or any combination thereof in the patient rooms, wherein the at least one processor is configured to determine further environmental conditions for each room including set points for at least one control device (214) of the building system that controls set points for at least one of temperature, light, shade, sound, or any combination thereof in the patient rooms;

wherein the patient rooms are included in a plurality of different hospital buildings, wherein the at least one processor includes at least one first processor (202) that is configured to determine correlation data that includes correlations between customized environmental conditions and a plurality of different medical conditions based at least in part on the determined environmental conditions and the corresponding patient data from the plurality of different hospitals buildings, wherein the at least one processor further includes a plurality of second processors (204) associated respectively with each of a plurality of building control systems (218) that respectively control environmental conditions of patient rooms in each of the plurality of different hospital buildings, wherein each second processor is configured to determine the at least one medical condition of each respective patient associated with each respective patient room, wherein each second processor is configured to access the environment-condition correlation data determined by the at least one first processor, wherein each second processor is configured to cause each respective building control system to respectively control environmental conditions of the patient rooms based at least in part on the accessed environment-condition correlation data and the determined at least one medical condition of each patient.

2. The system according to claim 1, wherein the at least one first customized environmental condition includes a first set point for the first room, wherein the building system is operable to set the at least one control device to the first set point based on the first customized environmental condition, wherein the at least one first customized environmental condition further includes a textual instruction that conveys an environmental setting that is manually controlled including at least one of location, sound level, or a combination thereof, wherein the at least one processor is configured to cause a display device (134) to output the textual instruction.

3. The system according to claim 1, wherein the at least one processor is configured to further determine the environmental conditions based on at least one of outside weather data, daylight data, or a combination thereof.

4. The system according to claim 1, wherein the patient data is stored in at least one data store (108, 206, 208), wherein the medical outcome associated with each medical condition in the patient data specifies at least one of a rate of recovery, quality of recovery, or a combination thereof, wherein the at least one data store includes the environmental conditions for the patient rooms, wherein the at least one first processor is configured to acquire the patient data and environmental conditions for the patient rooms from the at least one data store.

5. A method (300) for optimizing building system control of patient rooms comprising:

through operation of at least one processor (102, 402):

determining (304) at least one first customized environmental condition (146) for a first medical condition (130) that contributes to a positive medical outcome for the first medical condition based at least in part on environmental conditions (112) associated with each of a plurality of patient rooms (122, 124) and patient data (118) for patients in each of the plurality of rooms during time periods (138,140) for which the environmental conditions were present, wherein the patient data includes at least one medical condition (114) associated with each patient and at least one medical outcome (116) associated with the at least one medical condition;

causing (306) a building system (126) to control an environment of a first patient room (120) to have the at least one first customized environmental condition (110) based at least in part on a determination that the first medical condition (130) for the at least one first customized environmental condition corresponds to the first medical condition (132) that is associated with a first patient (128) in the first patient room;

wherein through operation of the at least one processor determining the environmental conditions based on a plurality of measurements acquired by a plurality of sensors in the plurality of patient rooms during time periods that the patients are in the respective patient rooms, which measurements include room temperature, light exposure, and audible sound, wherein the at least one first customized environmental condition corresponds to at least one level for at least one of temperature, light exposure, audible sound, or a combination thereof;

wherein causing the building system to control the environment of the first patient room includes causing the building system to control at least one of temperature, light, shade, sound or a combination thereof, wherein through operation of the at least one processor, further determining the environmental conditions based on set points for at least one control device of the building system that controls set points for at least one of temperature, light, shade, sound or a combination thereof in the patient rooms;

wherein the patient rooms are included in a plurality of different hospital buildings, wherein the at least one processor includes at least one first processor and a plurality of second processors, wherein the plurality of second processors are associated respectively with each of a plurality of building control systems that respectively control environmental conditions of patient rooms in each of the plurality of different hospital buildings, further comprising:

through operation of the at least one first processor, determining correlation data that includes correlations between customized environmental conditions and a plurality of different medical conditions based at least in part on the determined environmental conditions and the corresponding patient data from the plurality of different hospitals buildings;

through operation of each second processor:

accessing the correlation data determined by the at least one first processor,

determining at least one medical condition of each respective patient associated with each respective patient room,

causing each respective building control system to respectively control the environmental conditions of the patient rooms based at least in part on the accessed correlation data and the determined at least one medical condition of each patient.

6. The method according to claim 5, wherein the at least one first customized environmental condition includes a first set point for the first room, wherein causing the building system to control the environment of the first patient room includes causing the at least one control device to be set to the first set point, wherein the at least one first customized environmental condition further includes a textual instruction that conveys an environmental setting that is manually controlled including at least one of location, sound level, or a combination thereof, further comprising through operation of the at least one processor causing a display device to output the textual instruction.

7. The method according to claim 5, through operation of the at least one processor, further determining the environmental conditions based on at least one of outside weather data, daylight data, or a combination thereof.

8. The method according to claim 5, wherein the patient data is stored in at least one data store, wherein the medical outcome associated with each medical condition in the patient data specifies at least one of a rate of recovery, quality of recovery, or a combination thereof, wherein the at least one data store includes the environmental conditions for the patient rooms, further comprising through operation of the at least one first processor, acquiring the patient data and environmental conditions for the patient rooms from the at least one data store.

9. A non-transitory computer readable medium (426) encoded with executable instructions (430) that when executed, cause at least one processor (102, 402) to carry out the method according to any one of claims 5 to 8.