CLAIMS

~~1. A power management system for a medical device while operating on battery power comprising:~~

~~a medical device having a plurality of functions, each function associated with one of a pre-determined number of levels of power consumption;~~

~~an electronic circuit configured to measure an amount of charge remaining in a battery powering the medical device, and to associate the amount of charge with one of the pre-determined levels of power consumption; and~~

~~a controller configured to allow the medical device to perform one or more functions of the plurality of functions, as long as the one or more functions and the measured amount of charge are associated with the same level of power consumption.~~

~~2. The system of claim 1, wherein the medical device is an automated peritoneal dialysis device.~~

~~3. The system of claim 2, wherein the measured amount of battery charge comprises a first level sufficient to provide power to end a therapy and display an alert.~~

~~4. The system of claim 3, wherein the measured amount of battery charge comprises a second level greater than the first level, and is sufficient to guide a user via a display to perform a post-therapy breakdown of components of the peritoneal dialysis device.~~

~~5. The system of claim 4, wherein the measured amount of battery charge comprises a third level greater than the second level, and is sufficient to complete an automated draining of a user's peritoneum.~~

~~6. The system of claim 5, wherein the measured amount of battery charge comprises a fourth level greater than the third level, and is sufficient to complete an automated peritoneal dialysis cycle.~~

~~7. The system of claim 3, wherein the measured amount of battery charge is 200 milliamp-hours or greater.~~

~~8. The system of claim 4, wherein the measured amount of battery charge is 300 milliamp-hours or greater.~~

~~9. The system of claim 5, wherein the measured amount of battery charge is 500 milliamp-hours or greater.~~

~~10. The system of claim 6, wherein the measured amount of battery charge is 1100 milliamp-hours or greater.~~

~~11. The system of claim 6, wherein the controller is configured to not replenish a heater bag with dialysate solution, or to not heat dialysis solution in the heater bag.~~

~~12. The system of claim 11, wherein the controller is configured to complete an automated peritoneal dialysis cycle only if a temperature of the heater bag or a liquid volume of the heater bag are in a pre-determined range sufficient to complete a therapy cycle.~~

~~13. The system of claim 5, wherein the controller is configured to alert a user and to receive a user's command either to complete the automated drain or to end a therapy without automated draining.~~

~~14. The system of claim 2, wherein the measured amount of battery charge comprises a power-down level in which the controller notifies a user to disconnect from the automated peritoneal device, and powers down the device.~~

~~15. The system of claim 1, wherein the controller is configured to determine the amount of charge in the battery before the medical device is placed in operation, and is configured to provide a user an alert if the batter exhibits a fault condition, or has an amount of charge insufficient to alert the user during operation if a main power source is lost.~~

~~16. The system of claim 4, wherein the controller is configured to determine the amount of charge in the battery before the peritoneal dialysis device is placed in operation, and to prevent the user from operating the device if the battery has an amount of charge less than the second level.~~

~~17. The system of any of claims 6, or 10-12, wherein the controller is configured to suspend operation of the device until AC power is restored if an automated dialysate fill process has not started.~~

~~18. The system of claim 17, wherein the controller is configured to suspend operation of the device for a time limited to 30 minutes.~~

~~19. The system of any of claims 6, or 10-12, wherein the controller is configured to complete an automated fill, dwell and drain cycle if a dialysate fill process has begun.~~

~~20. The system of any of claims 5, 9 or 13, wherein the controller is configured to suspend operation of the device until AC power is restored if the device is in a dialysate fill or drain process.~~

~~21. The system of claim 20, wherein the controller is configured to suspend operation of the device for a time limited to 30 minutes.~~

1. A power management system for a medical device while operating on battery power, wherein the medical device is an automated peritoneal dialysis device and the power management system comprises:

a medical device having a plurality of functions, each function associated with one of a pre-determined number of levels of power consumption;

an electronic circuit configured to measure an amount of charge remaining in a battery powering the medical device, and to associate the amount of charge with one of the pre-determined levels of power consumption; and

a controller configured to allow the medical device to perform one or more functions of the plurality of functions, as long as the one or more functions and the measured amount of charge are associated with the same level of power consumption.

2. The system of claim 1, wherein the controller is configured to allow the medical device to end a therapy and display an alert, wherein ending a therapy and displaying an alert is associated with a first battery charge level, wherein the first battery charge level is preferably 200 milliamp-hours or greater.

3. The system of claim 2, wherein the controller is configured to allow the medical device to end the therapy, to display an alert, and to guide a user through post-therapy breakdown, wherein ending the therapy, displaying an alert and guiding a user through post-therapy breakdown is associated with a second battery charge level, wherein the second battery charge level is greater than the first battery charge level and is preferably 300 milliamp-hours or greater.

4. The system of claim 3, wherein the controller is configured to allow the medical device to perform draining of a user's peritoneum, wherein performing draining of a user's peritoneum is associated with a third battery charge level, wherein the third battery charge level is greater than the second battery charge level and is preferably 500 milliamp-hours or greater.

5. The system of claim 4, wherein the controller is configured to allow the medical device to perform one cycle of therapy, wherein performing one cycle of therapy is associated with a fourth battery charge level, wherein the fourth battery charge level is greater than the third battery charge level and is preferably 1100 milliamp-hours or greater.

6. The system of claim 5, wherein the controller is configured to not replenish a heater bag with dialysate solution, or to not heat the dialysis solution, and preferably to continue therapy if a temperature of the heater bag is in a pre-determined range and there is enough solution in the heater bag.

7. The system of claim 4, wherein the controller is configured to alert the user and to give the user the option to drain or to end the therapy without draining.

8. The system of claim 2, wherein the controller is configured to notify a user to disconnect and then to power down the device.

9. The system of claim 3, wherein the controller is configured to prevent the user from starting the therapy if the battery has an amount of charge less than the second battery charge level.

10. The system of claim 5 or 6, wherein the controller is configured to suspend operation of the device until AC power is restored if a dialysate fill process has not started, wherein the

controller is preferably configured to suspend operation of the device for a time limited to 30 minutes.

11. The system of any of claims 5-6, and 10, wherein the controller is configured to complete a fill, dwell and drain cycle if a dialysate fill process has started.

12. The system of claim 4 or 7, wherein the controller is configured to suspend operation of the device until AC power is restored if the device is in a dialysate fill or drain process, wherein the controller is preferably configured to suspend operation of the device for a time limited to 30 minutes.

13. The system of any one of the preceding claims, wherein the controller is configured to determine the amount of charge in the battery during start up, and is configured to provide a user an alert if the battery exhibits a fault condition, or has an amount of charge insufficient to alert the user if main power is lost.