WHAT IS CLAIMED IS:

1. An apparatus comprising:

a housing comprising:

a cover portion;

an engagement portion configured to couple to and cover an injection port of an injection site; and

at least one information element on the cover portion positioned to be automatically sensed by at least one sensor of the injection site when the engagement portion is coupled to or is being coupled to the injection port.

2. An apparatus as in claim 1, wherein the engagement portion comprises a female luer lock thread configured to couple to a male luer lock thread on the injection port.

3. An apparatus as in claim 1, wherein the at least one information element is encoded with one or more of: mechanically encoded information, magnetically encoded information, a near field communication (NFC) tag, and a radio frequency identification (RFID) tag.

4. An apparatus as in claim 1, wherein the at least one information element comprises optically encoded information.

5. An apparatus as in claim 4, wherein the optically encoded information comprises at least one bar code.

6. An apparatus as in claim 5, wherein the at least one bar code is sensed by the at least one sensor as the cover portion is circumferentially rotated.

7. An apparatus as in claim 1, further comprising: a disinfectant to disinfect the injection port upon the coupling of the engagement portion with the injection port.

8. An apparatus as in claim 1, wherein the injection port is fluidically coupled to a patient.

9. An apparatus as in claim 1, wherein the injection port is fluidically coupled to a fluid wasting reservoir.

10. An apparatus as in claim 1, wherein the information element encapsulates data characterizing one or more of: a disinfection state of the injection port, a caregiver identification, an identification of a patient, a procedural step performed in connection with care of the patient, a state of waste disposal, a lab sample, respiratory management for the patient, and dietary management for the patient.

11. An apparatus as in claim 1, wherein at least the cover portion of the housing is color coded with one of a plurality of color categories, each color category characterizing one or more of: caregiver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

12. An apparatus as in claim 1, wherein at least the information element is color coded with one of a plurality of color categories, each color category characterizing one or more of: care giver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

13. An apparatus as in claim 1, wherein the information element is affixed to an outer surface of the cover portion.

14. An apparatus as in claim 1, wherein the information element is integral to an outer surface of the cover portion.

15. An apparatus as in claim 1, wherein the engagement portion is further configured to seal the injection port of the injection site.

16. An apparatus comprising:

a housing comprising:

a first engagement portion on the housing configured to couple to and cover a first injection port of a first injection site;

at least one first information element on an outer surface of the first engagement portion of the housing positioned to be automatically sensed by at least one first sensor of the first injection site when the first engagement portion is coupled to or is being coupled to the first injection port;

a second engagement portion on the housing configured to couple to and cover a second injection port of a second injection site; and

at least one second information element on an outer surface of the second engagement portion of the housing positioned to be automatically sensed by at least one second sensor of the second injection site when the second engagement portion is coupled to or is being coupled to the second injection port.

17. An apparatus as in claim 16, wherein the at least one first information element is different from the at least one second information element.

18. An apparatus as in claim 16, wherein at least one of the first engagement portion and the second engagement portion comprises a female luer lock thread configured to couple to a male luer lock thread on the injection port.

19. An apparatus as in claim 16, wherein one or more of the at least one first information element and the at least one second information element is encoded with one or more of: mechanically encoded information, magnetically encoded information, a near field communication (NFC) tag, and a radio frequency identification (RFID) tag.

20. An apparatus as in claim 16, wherein one or more of the at least one first information element and the at least one second information element comprises optically encoded information.

21. An apparatus as in claim 20, wherein the optically encoded information comprises at least one bar code.

22. An apparatus as in claim 21, wherein the at least one bar code is sensed by the at least one sensor as the housing is circumferentially rotated.

23. An apparatus as in claim 16, further comprising: a disinfectant to disinfect at least one of (i) the first injection port upon the coupling of the first engagement portion with the first injection port and (ii) the second injection port upon the coupling of the second engagement portion with the second injection port.

24. An apparatus as in claim 16, wherein at least one of the first injection port and the second injection port is fluidically coupled to a patient.

25. An apparatus as in claim 16, wherein the at least one of the first injection port and the second injection port is fluidically coupled to a fluid wasting reservoir.

26. An apparatus as in claim 16, wherein one or more of the at least one first information element and the at least one second information element encapsulates data characterizing one or more of: a disinfection state of the injection port, a caregiver identification, an identification of a patient, a procedural step performed in connection with care of the patient, a state of waste disposal, a lab sample, respiratory management for the patient, and dietary management for the patient.

27. An apparatus as in claim 16, wherein at least a portion of the housing is color coded with one of a plurality of color categories, each color category characterizing one or more of: caregiver identification, a patient care procedural activity, a laboratory

sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

28. An apparatus as in claim 16, wherein one or more of the at least one first information element and the at least one second information element is color coded with one of a plurality of color categories, each color category characterizing one or more of: care giver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

29. An apparatus as in claim 16, wherein one or more of the at least one first information element and the at least one second information element is affixed to an outer surface of the housing.

30. An apparatus as in claim 16, wherein one or more of the at least one first information element and the at least one second information element is integral to an outer surface of the housing.

31. An apparatus as in claim 16, wherein at least one of the first engagement portion and the second engagement portion is further configured to seal the injection port of the injection site.

32. An apparatus in claim 16, wherein the first injection site and the second injection site physically connected to each other.

33. An apparatus as in claim 16, wherein the at least one first information element and the at least one second information element are identical.

34. An apparatus as in claim 16, wherein the at least one first information element and the at least one second information element are different.

35. An apparatus as in claim 16, wherein the first engagement portion is positioned opposite the second engagement portion.

36. An apparatus as in claim 16, wherein the first engagement portion is positioned at an angle as compared to a center line of the second engagement portion.

37. An apparatus as in claim 16, wherein the housing is flexible.

38. An apparatus comprising:

a housing comprising:

a first engagement portion on the housing configured to cover an injection port;

at least one information element on an outer surface of the first engagement portion of the housing positioned to be automatically sensed by at least one first sensor of the injection site when the first engagement portion is coupled to or is being coupled to the injection port;

a second engagement portion on the housing configured to cover the injection port;

at least one second information element on an outer surface of the second engagement portion of the housing positioned to be automatically sensed by the at least one first sensor of the injection site when the second engagement portion is coupled to or is being coupled to the injection port.

39. A method for implementation by one or more data processors comprising:

receiving, by at least one data processor, information from a medication delivery apparatus characterizing at least one information element on a cap covering an injection port of the medication delivery apparatus;

associating, by at least one data processor, the received information with data comprising one or more of: a disinfection state of the injection port, a caregiver identification, an identification of a patient, a procedural step performed in connection

with care of the patient, a state of waste disposal, a lab sample, respiratory management for the patient, and dietary management for the patient; and

promoting the associated data.

40. A method as in claim 39, wherein the medication delivery apparatus comprises:

a housing;

a fluid conduit at least partially extending within the housing and configured to deliver medication within a medication container to the patient;

an injection port extending from an external surface of the housing and configured to be coupled to a fluid outlet of the medication container, the injection port being fluidically and directly coupled to the fluid conduit; and

at least one sensor disposed within the housing to sense the at least one information element on the information cap.

41. A method as in claim 39, wherein the medication delivery apparatus further comprises:

a transmitter within the housing to wirelessly transmit information generated by the at least one sensor to a remote data collection system; and

a self-contained power source within the housing powering the at least one sensor and the transmitter.

42. A method as in claim 39, wherein promoting the associated data comprises at least one of: displaying the associated data, storing the associated data into a physical storage device, loading the associated data into memory, and transmitting the associated data to a remote computing system.

CLAIMS

1. A cap comprising:

an engagement portion configured to removably couple to and cover an injection port of an injection site; and

at least one information element on the cap positioned to be automatically sensed by at least one sensor of the injection site when the engagement portion is coupled to or is being coupled to the injection port,

wherein the cap includes a disinfectant to disinfect the injection site, and wherein the at least one information element encapsulates data characterizing a disinfection state of the injection port.

2. The cap as in claim 1, wherein the engagement portion comprises a female luer lock thread configured to couple to a male luer lock thread on the injection port.

3. The cap as in claim 1, wherein the at least one information element is encoded with one or more of: mechanically encoded information, magnetically encoded information, a near field communication (NFC) tag, and a radio frequency identification (RFID) tag.

4. The cap as in claim 1, wherein the at least one information element comprises optically encoded information.

5. The cap as in claim 4, wherein the optically encoded information comprises at least one bar code.

6. The cap as in claim 5, wherein the at least one bar code is sensed by the at least one sensor as the cap is circumferentially rotated.

7. The cap as in claim 1, wherein the injection port is fluidically coupled to a patient.

8. The cap as in claim 1, wherein the injection port is fluidically coupled to a fluid wasting reservoir.

9. The cap as in claim 1, wherein the at least one information element further encapsulates data characterizing one or more of: a caregiver identification, an identification of a patient, a procedural step performed in connection with care of the patient, a state of waste disposal, a lab sample, respiratory management for the patient, and dietary management for the patient.

10. The cap as in claim 1, wherein the cap is color coded with one of a plurality of color categories, each color category characterizing one or more of: caregiver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

11. The cap as in claim 1, wherein the at least one information element is color coded with one of a plurality of color categories, each color category characterizing one or more of: care giver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

12. The cap as in claim 1, wherein the at least one information element is affixed to an outer surface of the cap.

13. The cap as in claim 1, wherein the at least one information element is integral to an outer surface of the cap.

14. The cap as in claim 1, wherein the engagement portion is further configured to seal the injection port of the injection site.

15. A cap comprising:

a first end and an opposite second end;

a first engagement portion on the first end of the cap configured to removably couple to and cover a first injection port of a first injection site;

at least one first information element on an outer surface of the first engagement portion of the cap positioned to be automatically sensed by at least one first sensor of the first injection site when the first engagement portion is coupled to or is being coupled to the first injection port;

a second engagement portion on the opposite second end of the cap configured to couple to and cover a second injection port of a second injection site;

at least one second information element on an outer surface of the second engagement portion of the cap positioned to be automatically sensed by at least one second sensor of the second injection site when the second engagement portion is coupled to or is being coupled to the second injection port; and

a disinfectant to disinfect at least one of (i) the first injection port upon the coupling of the first engagement portion with the first injection port and (ii) the second injection port upon the coupling of the second engagement portion with the second injection port, wherein one or more of the at least one first information element and the at least one second information element encapsulates data characterizing a disinfection state of the injection port.

16. The cap as in claim 15, wherein the at least one first information element is different from the at least one second information element.

17. The cap as in claim 15, wherein at least one of the first engagement portion and the second engagement portion comprises a female luer lock thread configured to couple to a male luer lock thread on the injection port.

18. The cap as in claim 15, wherein one or more of the at least one first information element and the at least one second information element is encoded with one or

more of: mechanically encoded information, magnetically encoded information, a near field communication (NFC) tag, and a radio frequency identification (RFID) tag.

19. The cap as in claim 15, wherein one or more of the at least one first information element and the at least one second information element comprises optically encoded information.

20. The cap as in claim 19, wherein the optically encoded information comprises at least one bar code.

21. The cap as in claim 20, wherein the at least one bar code is sensed by the at least one first sensor or the at least one second sensor as the cap is circumferentially rotated.

22. The cap as in claim 15, wherein at least one of the first injection port and the second injection port is fluidically coupled to a patient.

23. The cap as in claim 15, wherein the at least one of the first injection port and the second injection port is fluidically coupled to a fluid wasting reservoir.

24. The cap as in claim 15, wherein one or more of the at least one first information element and the at least one second information element further encapsulates data characterizing one or more of: a caregiver identification, an identification of a patient, a procedural step performed in connection with care of the patient, a state of waste disposal, a lab sample, respiratory management for the patient, and dietary management for the patient.

25. The cap as in claim 15, wherein at least a portion of the cap is color coded with one of a plurality of color categories, each color category characterizing one or more of: caregiver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

26. The cap as in claim 15, wherein one or more of the at least one first information element and the at least one second information element is color coded with one of a plurality of color categories, each color category characterizing one or more of: care giver identification, a patient care procedural activity, a laboratory sample, a state of the injection port, a fluid injected into the injection port, and a state of a patient.

27. The cap as in claim 15, wherein one or more of the at least one first information element and the at least one second information element is affixed to an outer surface of the cap.

28. The cap as in claim 15, wherein one or more of the at least one first information element and the at least one second information element is integral to an outer surface of the cap.

29. The cap in claim 15, wherein the first injection site and the second injection site physically connect to each other.

30. The cap as in claim 15, wherein the at least one first information element and the at least one second information element are identical.

31. The cap as in claim 15, wherein the first engagement portion is positioned opposite the second engagement portion.

32. The cap as in claim 15, wherein the cap is flexible.

33. A cap comprising:

a first end and an opposite second end;

a first engagement portion on the first end of the cap configured to cover an injection port;

at least one information element on an outer surface of the first engagement portion of the cap positioned to be automatically sensed by at least one first

sensor of the injection site when the first engagement portion is coupled to or is being coupled to the injection port;

a second engagement portion on the opposite second end of the cap configured to cover the injection port;

at least one second information element on an outer surface of the second engagement portion of the cap positioned to be automatically sensed by the at least one first sensor of the injection site when the second engagement portion is coupled to or is being coupled to the injection port; and

a disinfectant to disinfect the injection port upon the coupling of the first engagement portion or the second engagement portion with the injection port, wherein one or more of the at least one first information element and the at least one second information element encapsulates data characterizing a disinfection state of the injection port.

34. A method for implementation by one or more data processors comprising:

receiving, by at least one data processor, information from a medication delivery apparatus characterizing at least one information element on a removable cap covering an injection port of the medication delivery apparatus, wherein the cap includes a disinfectant to disinfect the injection site;

associating, by at least one data processor, the received information with data comprising a disinfection state of the injection port; and

promoting the associated data.

35. A method as in claim 34, wherein the medication delivery apparatus comprises:

a housing;

a fluid conduit at least partially extending within the housing and configured to deliver medication within a medication container to the patient;

an injection port extending from an external surface of the housing and configured to be coupled to a fluid outlet of the medication container, the injection port being fluidically and directly coupled to the fluid conduit; and

at least one sensor disposed within the housing to sense the at least one information element on the information cap.

36. A method as in claim 34, wherein the medication delivery apparatus further comprises:

a transmitter within the housing to wirelessly transmit information generated by the at least one sensor to a remote data collection system; and

a self-contained power source within the housing powering the at least one sensor and the transmitter.

37. A method as in claim 34, further comprising:

associating, by the at least one data processor, the received information with data comprising one or more of: a caregiver identification, an identification of a patient, a procedural step performed in connection with care of the patient, a state of waste disposal, a lab sample, respiratory management for the patient, and dietary management for the patient, wherein promoting the associated data comprises at least one of: displaying the associated data, storing the associated data into a physical storage device, loading the associated data into memory, and transmitting the associated data to a remote computing system.