



DECISIO

**DECISIO HEALTH PATIENT DASHBOARD (INSIGHTIQ™)
(DECISIO INSIGHT)**

USER GUIDE

DOCUMENT VERSION: LB-20008, REV. J

DECISIO HEALTH, INC.

520 POST OAK BOULEVARD SUITE 600

HOUSTON, TX 77027

Caution: Federal law (U.S.) restricts this device to sale by or on the order of a physician.

TABLE OF CONTENTS

INTRODUCTION	1
INDICATIONS FOR USE	1
CONTRAINDICATIONS	1
PRECAUTIONS	1
NOTES	2
PATIENT DASHBOARD DESCRIPTION	3
ACCESSING AND USING THE PATIENT DASHBOARD	5
ELEMENTS ON THE PATIENT DASHBOARD	9
PROTOCOL INITIATION USING THE MOBILE PATIENT DASHBOARD	15
TROUBLESHOOTING	20
INSTALLATION	22

INTRODUCTION

InsightIQ™ (Decisio Insight) (also referred as Decisio Health, Inc. (“Decisio Health”) Patient Dashboard in this manual) is a software dashboard installed at patient care facilities and provides situational awareness to clinicians at the bedside. The Patient Dashboard aggregates patient data from the Electronic Medical Record system (“EMR”). Data received includes laboratory data, nursing documentation in the EMR, vital signs, and other accessory patient devices and places this information on a single screen that is accessible from a compatible internet browser. The patient data received by the device are stored, filtered, and displayed through the Patient Dashboard Client Application (the web browser application), to care providers. The Patient Dashboard Client Application can be accessed on bedside television displays, smartphones, tablets, desktop computers, or laptop computers with a capability of accessing a compatible web browser. When configured, the Patient Dashboard display provides near real-time data as data is continuously pushed from the healthcare facility EMR. The Patient Dashboard is customized by the hospital and Decisio Health to provide up to date clinical information at the point of patient care that is context sensitive to the patient and situation. The device is to be used as an adjunct to monitoring devices for aiding in the treatment or diagnosis of the patient. The Patient Dashboard is designed as a convenience tool and it does not replace a diagnostic or treatment decision made by a physician.

The Patient Dashboard consists of the Patient Dashboard server software and the Patient Dashboard Client Application. This user guide is intended as an instruction manual on use of the Patient Dashboard Client Application. The Patient Dashboard server software is configured and installed by Decisio Health in a healthcare facility that meets the compatibility requirements, which are listed in the “Installation Section” of this manual.

INDICATIONS FOR USE

The Decisio Health Patient Dashboard (Decisio Insight) is a decision support device indicated for aggregating, displaying, and managing physiologic and other patient information. This information is generated by third party medical devices and patient information systems. The device performs automated calculations on patient data collected by third party devices based on approved clinical protocols at patient care facilities.

The Decisio Health Patient Dashboard (Decisio Insight) is intended for use by clinicians in healthcare facilities.

CONTRAINDICATIONS

The Patient Dashboard is not intended for use on mobile devices anywhere mobile devices are prohibited.

PRECAUTIONS

1. The Patient Dashboard is intended to be used by healthcare providers, including physicians, nurses, and respiratory therapists. People without medical training may not understand the information as presented and may not be using the device as intended.
2. The Patient Dashboard is designed to be accessed from the following web browsers: Google Chrome (and Chromium). Other web browser access may lead to displaying a layout of the page content that is difficult to read, the application may remain in an “OFFLINE” state or the page may not be able to load (display any information) at all.
3. Electronic Medical Record (EMR) Data Sources and Data Types must not be added or changed without involving Decisio otherwise the information displayed may not be correct.

WARNINGS

1. Users are cautioned against accessing patient information not related to the care of the patient. This information is protected under the Health Insurance Portability and Accountability Act (HIPAA) and violation of the privacy laws may result in disciplinary action and / or fines.
2. The Decisio Patient Dashboard should not be relied upon as a primary vital sign monitor. The device is used with the Electronic Medical Record system. The device is not connected directly to vital sign monitors and it is not a replacement for vital sign monitor displays. Not all information pertaining to a patient will appear on the Patient Dashboard.
It is advised that clinicians continue to review patient data from standard vitals monitoring devices and other primary data sources from the EMR for clinical decision making. The Patient Dashboard can be used to assist in the decision making process.
3. Since the Patient Dashboard is not intended for primary patient monitoring, it does not provide audible alarms that are given by primary vital sign monitors.
4. The Patient Dashboard is configured with your healthcare facility IT department during installation. Do not attempt to change the EMR system or patient information data sources as such changes may result in data loss or corruption. Contact Decisio Health, Inc. for set up of additional or new inputs.
5. Review Patient Dashboard display for any technical messages that indicate that data is not updated (e.g., “service offline”, error messages, and other notes that would appear in the center of the screen). These error states must be resolved to continue monitoring the patient with the Decisio Health Patient Dashboard (Decisio Insight). Please contact Decisio Health for assistance.
6. Do not use the Patient Dashboard if you do not understand the information displayed.
7. When viewing the Patient Dashboard on a mobile device, ensure that the mobile device meets the minimum display resolution requirement of 640X480 pixels. Use of display devices with resolution lower than 640X480 pixels may lead to difficulty in recognizing Patient Dashboard displayed information.
8. If a mobile device on which the Patient Dashboard is accessed to display patient information is lost, contact the IT department immediately to minimize possibility of unauthorized access and ensure that patient data remains secure. To further reduce unauthorized access to sensitive patient information, it is strongly recommended that all mobile devices maintain encryption of the device.

NOTES

1. Decisio Health does not supply display devices. Healthcare facility bedside displays, computers, and other devices can be used. Clinicians may also access the Patient Dashboard display from their own mobile phone or tablet devices with internet access (mobile data plan or other internet connection). Mobile phone offering is optional and limited to installations in the United States at this time.
2. In order to access the Patient Dashboard via a supported internet browser, obtain a secured, authenticated access from the healthcare facility IT department.
3. The Patient Dashboard is set up in accordance with your healthcare facility. When healthcare facility implements a new care protocol through the Patient Dashboard, the data will automatically be presented per the new protocol.
4. The Patient Dashboard is a display only device. It does not allow updating patient data vitals or entering any patient information.

PATIENT DASHBOARD DESCRIPTION

The Decisio Health Patient Dashboard (InsightIQ) (Decisio Insight) is a data aggregation and display tailored to patient’s situation and context. The Patient Dashboard is customized by the hospital to ensure that clinical information is presented to the medical care provider at the point of patient care. The Patient Dashboard is designed to display patient information, per facility direction care protocols, and provide visual cues to care providers on a single display device. The Patient Dashboard is capable of displaying patient demographics, labs, vital signs, medications, and care provider documentation that are maintained in and received from the facility EMR system.

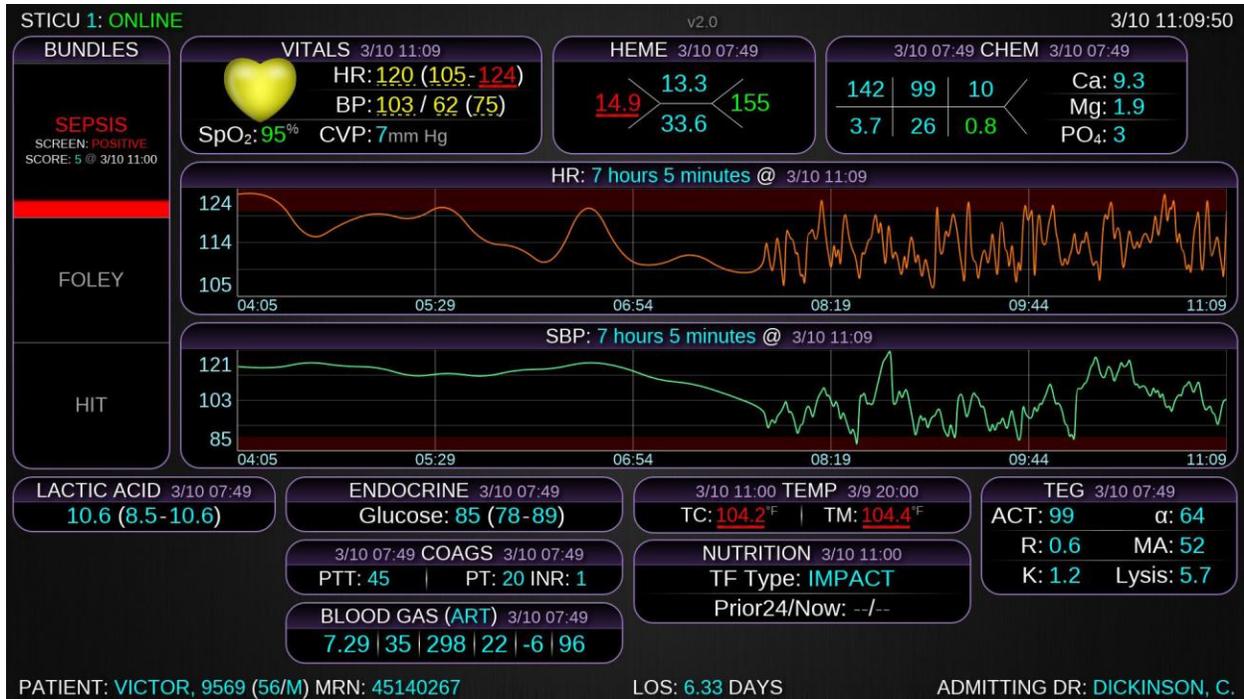


Figure 1. An example of a Patient Dashboard

Additionally, the hospital may customize the system to provide calculations based on its patient care protocols for display on the Patient Dashboard. These calculations may include color coding of the Patient Dashboard screen to display elements that are in the normal range (green), borderline values (yellow), or outside of the normal range (red). Other calculations provided by the hospitals protocol may include but are not limited to missed dosages of medications or screening protocols such as for sepsis.

The Patient Dashboard is accessible via a web browser and can be accessed on any device capable of running the Chrome or Chromium web browser. The Patient Dashboard can also be displayed on a TV / monitor inside the patient’s room, computers at the bedside, or mobile devices.

The Patient Dashboard is to be used as an adjunct to monitoring devices for aiding in the treatment or diagnosis of the patient. It does not replace a diagnostic or treatment decision made by a physician.

Facility Based Protocols

The Patient Dashboard application is customized with protocols provided by the facility and tailored to specific patient populations based on the location or department managing that particular patient. At the facilities’ discretion, the Patient Dashboard may include calculations of values based on available

information from the EMR. These calculations may take different forms. Some are to provide visual cues to clinicians of values that are in the normal (green), borderline (yellow), outside normal (red) and inactive (gray) ranges (Table 1).

Table 1: Colors Used in the Patient Dashboard to Represent Facility Based Calculations

Color	Interpretation
Green	Within Normal limits
Yellow	Borderline
Red	Out of Range
Blue	Neutral – no facility protocol associated
Gray	Inactive

Additionally, groups of related items may be placed together in a care bundle. These bundles would govern specific areas of care such as nutrition or deep vein thrombosis (DVT) prevention. The bundles may contain several elements and are calculated from parameters provided by the facility. All of the calculations performed by the Patient Dashboard may be performed by a healthcare provider at the bedside. These calculations are provided as a convenience to the clinician. An example of such a bundle calculation is shown in Figure 1 where the sepsis bundle has turned red for the patient in Bed #1. At the facilities’ discretion, a protocol based recommendation may be displayed for the particular bundle such as “contact on call physician” or “begin sepsis workup”. These recommendations are provided as a convenience, and clinicians should use clinical knowledge and judgment in following these recommendations, as they would with all facility’s protocols.

Patient data received by the Patient Dashboard is color coded based on the color code ranges provided by the Facility Protocols. An example of the color coding of values is show in Figure 2. Protocols may vary from one healthcare facility to another, thus the ranges used in this example are for illustration purposes only.

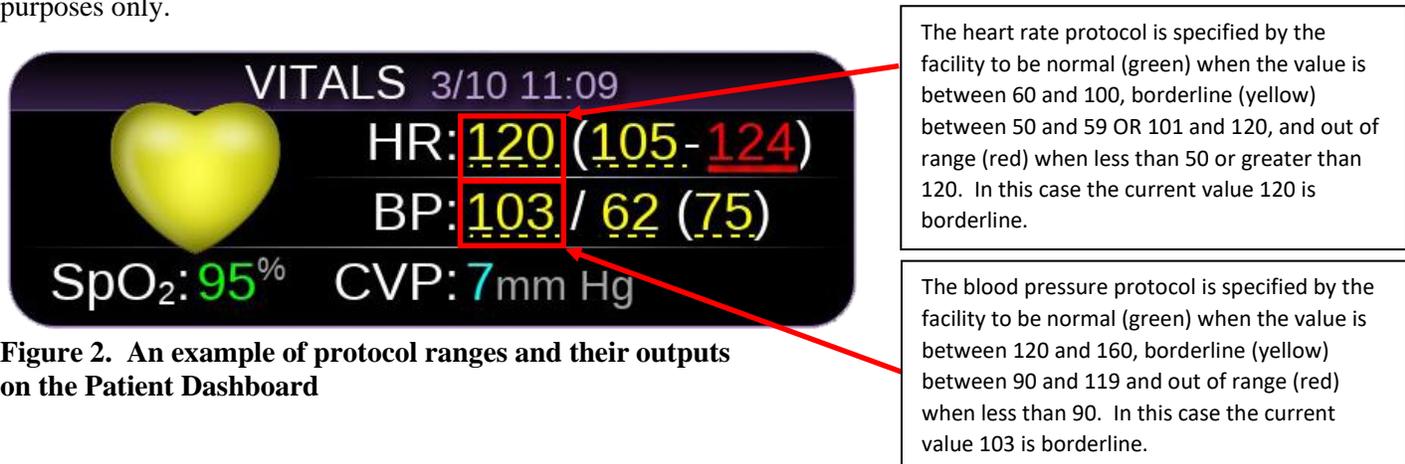


Figure 2. An example of protocol ranges and their outputs on the Patient Dashboard

The facility protocol calculations dictate the visual alarms (value color coding- normal, borderline, and out of range). The Patient Dashboard does not have any audible alarms. To view the visual color coded alarms, a user must be positioned relative to the Patient Dashboard such that the display is in his or her sight and at convenient proximity such that the values on the screen can be read.

The Patient Dashboard is intended to update values near real-time relative to the source of data (e.g., physiological primary monitor or lab data update to EMR). These values may be displayed on the system with up to a 60 second delay under normal operating conditions. This delay applies to all versions of the Patient Dashboard. The Patient Dashboard is not the primary monitor and is not a replacement for the primary monitors that may generate alarms. Therefore, alarms presented by the primary monitor will take precedence. The type of information that is intended to be conveyed pertains to reversible injury, discomfort or reversible minor injury where prompt or immediate action is not required. Thus the device alarms are considered “Low Priority Alarm Conditions”. The protocols are installed at the time of installation of the Patient Dashboard and are not user adjustable. At the time of installation, verification of the color coded alarms is performed to ensure that protocols are installed correctly and the device performs as intended.

For further questions regarding what protocols are in use at the facility, please contact your facility’s administration.

ACCESSING AND USING THE PATIENT DASHBOARD

To access the Patient Dashboard Display, the hospital will provide a Uniform Resource Locator (URL) that can be entered into your web browser. Once entered into the browser, the user will be presented with an index page (see **Figure 3**) that lists the facility beds and respective admitted patients, as entered into the EMR system.

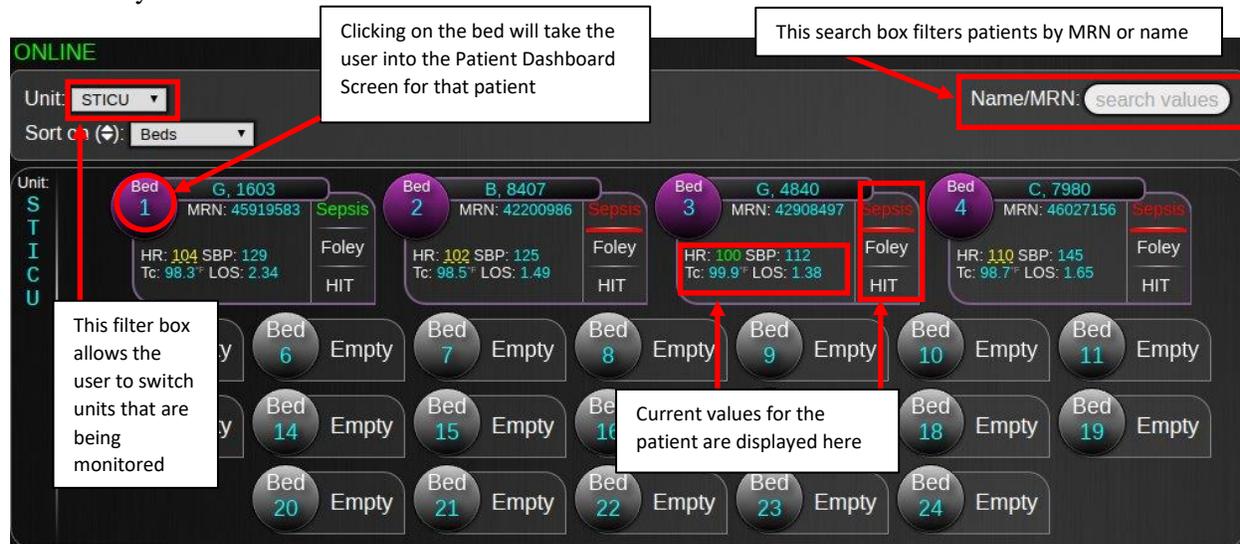


Figure 3. An example of the Decisio Health Index Page (Computer or Bedside Dashboard Display)

This index page will be different for every installation and may include patients restricted to a particular facility unit or service. Clicking on the bed indicator for a patient (see **Figure 3**) will take you to a web page containing monitoring information specific to that patient. The individual patient monitored information page is similar to the one displayed in **Figure 1**.

Because the Patient Dashboard is accessible from devices capable of running a compatible browser, users may access the Patient Dashboard from a healthcare facility compliant mobile device such as a smartphone or tablet. On a mobile device, the Patient Dashboard Home Screen is similar to the one shown in **Figure 4a**. The Patient Data Screen for an individual patient is similar to the one shown in **Figure 4b**.

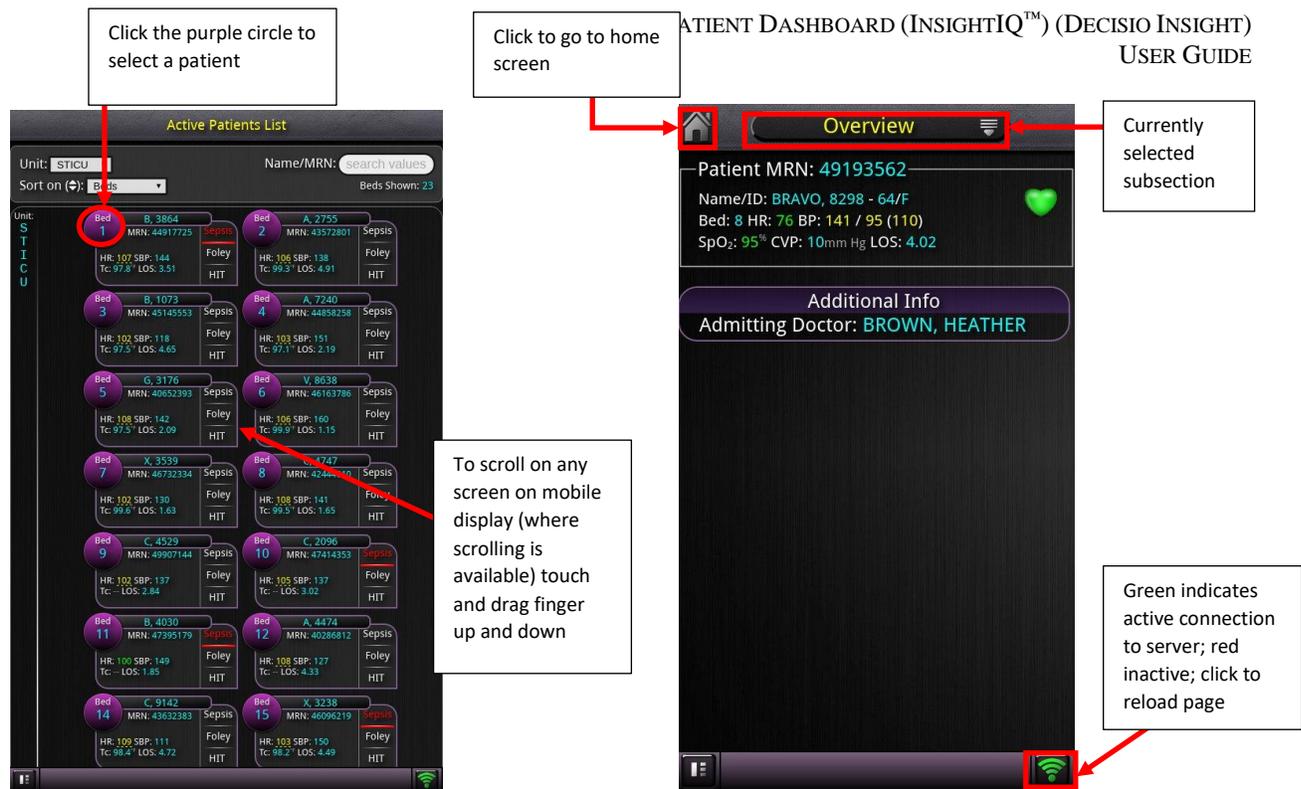


Figure 4a (left). The Patient Dashboard Home Screen (Mobile Device Display)

Figure 4b (right). The Patient Dashboard Patient Data Screen (Mobile Device Display). This screen is accessed from the Home Screen by clicking on the purple circle corresponding to patient's bed (see Figure 4a)

Due to space limitations, the Patient Dashboard may not appear the same as it does in **Figure 1** on the mobile device. All the elements on the small format displays (smartphone and tablets) are configured to be readable on smaller displays by dividing the display into separate data screens that can be accessed from the OVERVIEW screen (see **Figure 4b**). In order to access additional sections, the menu can be tapped on the "Overview" button on the top of the OVERVIEW screen (see **Figure 5**). The available display options for small-screen display are identical to those automatically displayed on the larger screen of a desktop computer or a bedside television monitor.

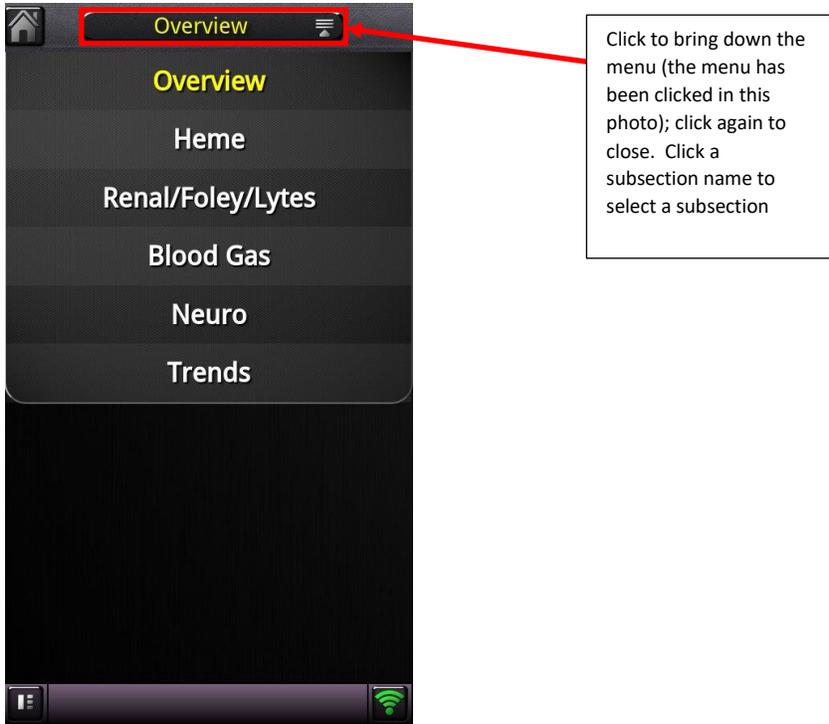


Figure 5. The Patient Dashboard access on a smartphone. The menu has been selected and has extended down the screen to allow for navigation between sections

Once the desired menu selection has been made the display will change to show the new subsection (e.g., neurological data, blood gas, etc.). The selected section will appear on the menu and will be colored yellow as shown in **Figure 4b** and **Figure 5**.

Additionally, the desktop version of the Patient Dashboard allows for changing views (see **Figure 6**) of data.



Figure 6. The desktop version of the Patient Dashboard has different options to view the data

In order to access the Patient Dashboard from a device, the user must login. Depending on your facility's installation, the login credentials maybe part of a global login system (the same login is used for many services) or will be specific to the Patient Dashboard. If you are unsure what login credentials to use, contact your system administrator.

When accessing the Patient Dashboard, you will be be presented with a screen similar to what is shown in **Figure 7** (whether on the mobile Dashboard or the desktop version).

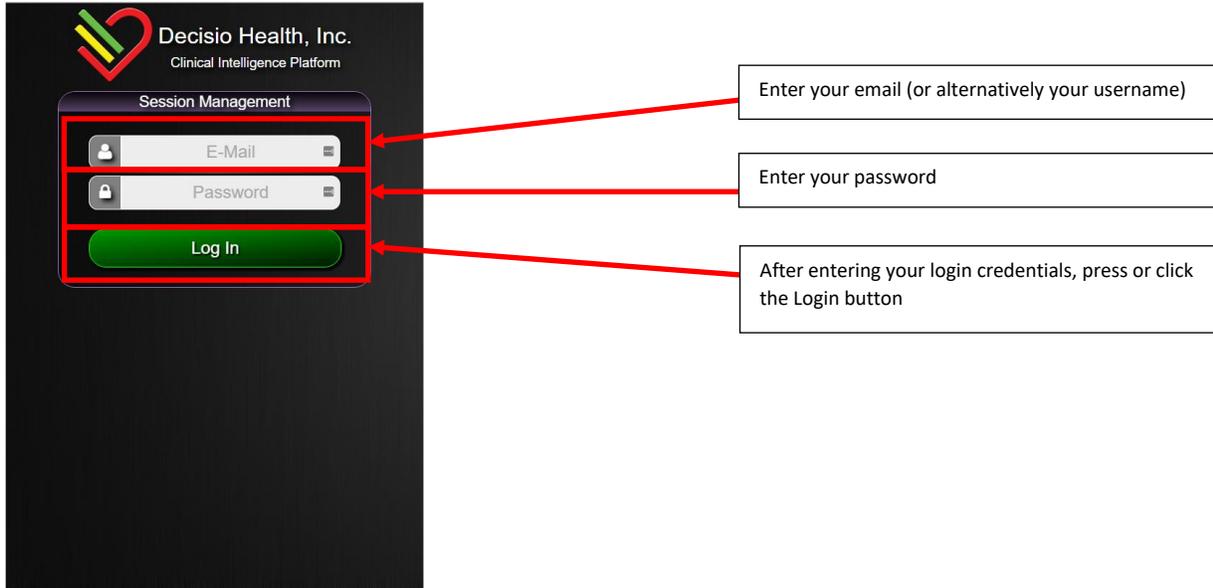


Figure 7. The login screen for the Patient Dashboard. This screen is the same whether accessing the Patient Dashboard on a mobile device or on a desktop computer.

If you encounter an error during login (see **Figure 8**), please contact technical support.

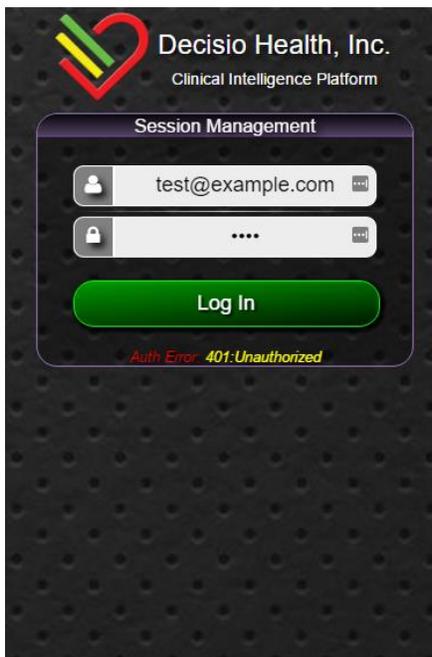


Figure 8. The user encountered an authentication error and is unable to login.

Once the login process has been completed, the Patient Dashboard is ready to be used as described above.

After use, you may choose to logout of the device if the device is shared between multiple users. The steps to logout are visually depicted in **Figure 9** (mobile) and **Figure 10** (desktop).

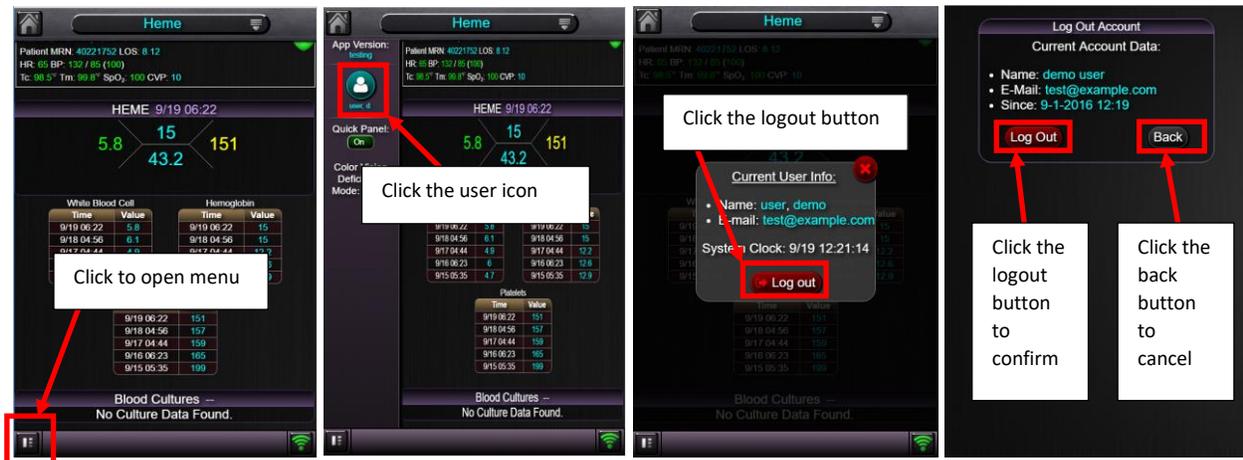


Figure 9 – Steps to logout from the mobile Patient Dashboard

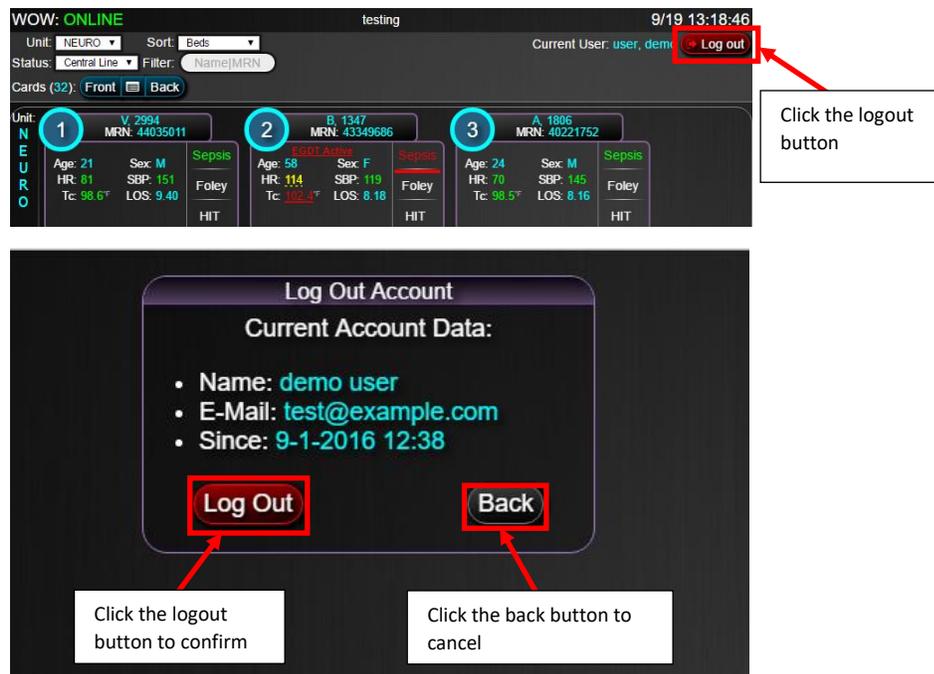


Figure 10 – Steps to logout from the desktop Patient Dashboard

ELEMENTS ON THE PATIENT DASHBOARD

Every Patient Dashboard will be customized to the specific facility’s requirements or specifications. However, common elements are sectioned into blocks and labeled to help keep related patient information grouped together. For instance, the “VITALS” block displays heart rate (HR), Blood Pressure (BP), peripheral capillary oxygen saturation (SpO₂), and Central Venous Pressure (CVP). Abbreviations on the screen are per standard medical abbreviations. **Figure 11** illustrates the patient data web page and defines the elements displayed. Please note that the information viewed on your display may vary from that

which is provided in **Figure 11** due to the customized display determined by your facility. Please contact your facility IT department for questions on the display.

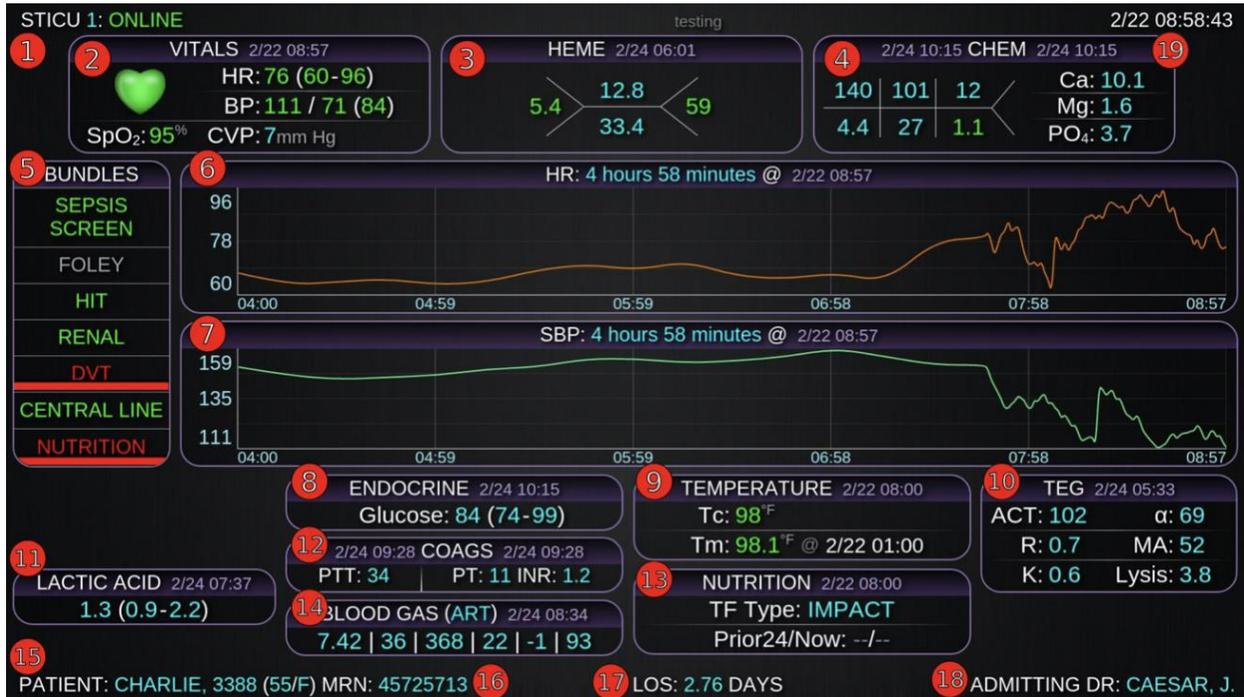


Figure 11. An example of a Patient Dashboard with labeled patient blocks

The numbers of this list below correspond to the blocks listed in **Figure 11**:

- 1. Bed / Online Indicator** – contains a list of the patient’s bed and / or unit. It also indicates the system’s connection status with the Patient Dashboard server (green = online, red = offline)
- 2. Vitals** – contains information such as heart rate with a heart rate range, blood pressure, oxygen saturation, and central venous pressure
- 3. Heme** – contains current complete blood count data. May include other parameters from this lab test depending on display of information (see **Figure 12** for shorthand notation explanation of complete blood count notation)

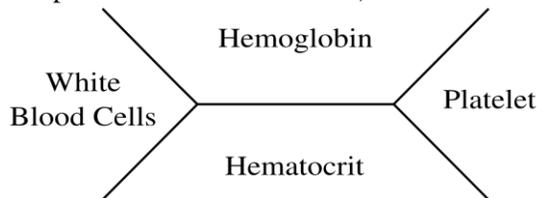


Figure 12. Complete Blood Count Shorthand Notation

- Renal/Foley/Lytes** – contains a list of the patient’s current chemistry panel, inputs and output for the hospital specified time period in aggregate, and urine output for the last hour and for a time period specified by the facility. The notation in this cell is defined in **Figure 13**.

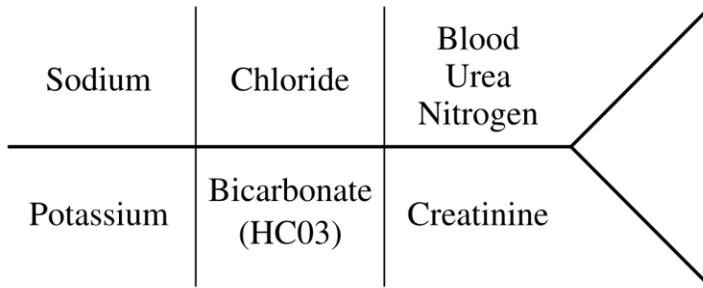


Figure 13. Chemistry Panel Shorthand Notation (also called, Basic Metabolic Profile (BMP) or Chemistry Panel

- Bundles of Care** – contains a hospital provided list of protocols with status updates. These bundles will be colored red / yellow / green based on the hospital’s provided protocols. In the case of a bundle being not applicable or not available, the color will be gray.
- Heart Rate Trend** – provides a graph of the heart rate over a given time period. The time period specified here may change based on facility preference.
- Blood Pressure Trend** – provides a graph of the systolic blood pressure over a given time period. The time period specified here may change based on facility preference.
- Endocrine** – provides the patient’s glucose trend for a given time period, and the amount of insulin given in that time period
- Temperature** – contains the current temperature (Tc) and the maximum temperature (Tm) for the given time period
- Thromboelastogram** – contains the latest thromboelastogram values for the patient.
- Lactic Acid** – Contains the latest lactic acid level for the patient.
- Coagulation Profile** – Contains the latest coagulation parameters. These parameters may update independently of one another. The time for each (Partial Thromboplastin time – PTT on the left; Prothrombin Time - PT and International Normalized Ratio – INR on the right)
- Nutrition** – contains the current nutrition status for the patient. This may include tube feed information as well as total calorie counts
- Blood Gas** – contains blood gas values for the patient. This may include the blood gas source (arterial or venous) as well as the parameters. The notation in this cell is defined in **Figure 14**.



Figure 14. Blood Gas Panel Shorthand Notation

- Patient Identifiers** – contains a list of the patient name, date of birth, or other demographics. This information is to help ensure that the information displayed is for the correct patient. It is strongly advised that this section be looked at first to ensure that the correct patient is being viewed.
- Medical Record Number** – The medical record number is included to ensure that the information being displayed is the correct patient. It is strongly advised that this section is looked at first to ensure that the correct patient is being viewed.
- Length of Stay (LOS)** – Measures the patient’s length of stay from admission in days.
- Admitting Doctor** – provides the name of the admitting doctor if applicable

19. **Current Date and Time** –displays the system’s current date and time. This timestamp is synchronized with the Network Time Protocol (NTP) standard and is used as a point of reference for all times displayed on the screen. It is important to understand that the current time maybe different from that of times on blocks. Since blocks are updated when data is available they frequently will be different from the current time. The current time will also be displayed as hour:minute:second

A typical block is shown in **Figure 15**. Data elements in the block are updated as new values become available in the EMR. These values will update inside the block without any user needed action. A time is also listed to show when the block has been updated.



Figure 15. Zoomed in view of a block.

Blocks may also list data containing a range of a particular value for a particular amount of time. This is represented with the shorthand shown in **Figure 16**. These values shown in **Figure 16** represent the minimum and maximum values collected for that patient in a time range defined by the facility.



Figure 16. Zoomed in view of a block showing a range of lactate values

The dashboard displayed in this manual may be different from the one running at your facility. The facility will customize this display for groups of patients, including but not limited to age, location, admitting diagnoses, and department responsible for care of that group of patients. For any patient, the mobile device display will have the same content as the bedside dashboard display with respect to data content. The Patient Dashboard screen represented here is used as an example to help you understand the rationale behind some of the display elements. Further questions regarding the elements displayed should be directed at the hospital IT staff.

For the mobile Patient Dashboard, common elements are also grouped into subsections. To navigate between sub sections see **Figure 5**. Examples of these subsections are listed in **Figure 17**. Each Patient Dashboard installation is customized to the facility’s specifications. Your facility may have different subsections than what is pictured.

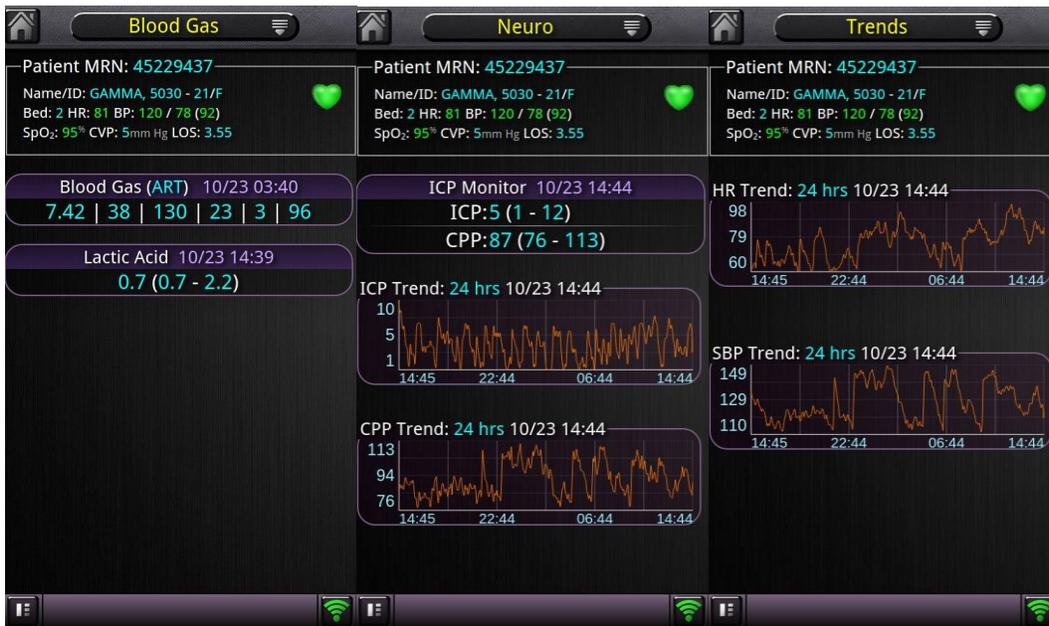


Figure 17. The Mobile Patient Dashboard. For this single patient, all the subsections are displayed in separate selected screens. To switch between subsections, please see Figure 5.

The mobile Patient Dashboard also may have repeated measurements listed inside a table. These values are listed as having the **latest (newest) values at the top of table** and the earliest (oldest) values being displayed at the bottom of the table (see **Figure 18**)

Glucose	
Time	Value
7/5 21:42	86
7/4 21:41	83
7/3 21:41	93
7/2 21:40	88
7/1 21:40	87

Figure 18. Table of Repeated Measurements on the mobile Patient Dashboard

Users who have difficulty differentiating colors due to color vision deficits may request Decisio Health to enable Color Vision Deficit mode on the Patient Dashboard. In this mode, protocol calculations will be displayed with a non-color based visual based cue to ensure that users with color vision deficit are able to identify the alarm associated with the calculation. These visual cues are shown in **Figure 19** and are described in **Table 2**.



Figure 19. The Patient Dashboard with Color Vision Deficit mode enabled

In this mode, borderline values are color coded yellow and a dashed underline is displayed beneath to value. Out of range values are color coded red and a solid underline is displayed beneath the value. Values that are within normal limits or have no associated protocol have no additional visual distinction.

Table 2: Colors and Visual Cues Used in the Patient Dashboard to Represent Facility Based Calculations. The visual cues are available in Color Vision Deficit Mode

Color	Visual Cue	Interpretation
Green	No visual cue	Within Normal limits
Yellow	Dashed Underline	Borderline
Red	Solid Underline	Out of Range

Blue Gray	No visual cue	Neutral – no facility protocol associated
	No visualis cue	Inactive

PROTOCOL INITIATION USING THE MOBILE PATIENT DASHBOARD

At the time of installation, the Patient Dashboard is configured with protocols provided by the clinical staff of the facility. These protocols fall into two categories: protocols that are run for every patient on a particular interval and protocols that must be initiated by the clinicians based on medical decision making. Protocols that are available for every patient will appear on the Dashboard at all times. Protocols that must be initiated can be done so by the clinical staff using the mobile Patient Dashboard.

Figure 20 shows a screenshot of a mobile Patient Dashboard open to the “Overview” tab. In this tab, the user is presented with a button to activate a protocol for management of severe sepsis.



Figure 20. The mobile Patient Dashboard open to an “Overview” screen for a particular patient (left). On the right is the Patient Dashboard display in the room or available in the desktop browser.

If the user determines that the patient, in this case, has severe sepsis, he or she may initiate the protocol by pressing the “Activate” button. This button is highlighted in **Figure 21a**. Once pressed, a confirmation box will appear (see **Figure 21b**). Once confirmed, the Patient Dashboard will trigger the display to change in the room to begin a protocol calculation for managing the patient with severe sepsis as illustrated in **Figure 22**. Once activated, the user may cancel the protocol if it was triggered in error by hitting the cancel button (see **Figure 23**). If the user has resolved the issue he or she may also push the “Resolve” button (also **Figure 23**). In either scenario, the display will return to the appearance as shown in **Figure 20**.

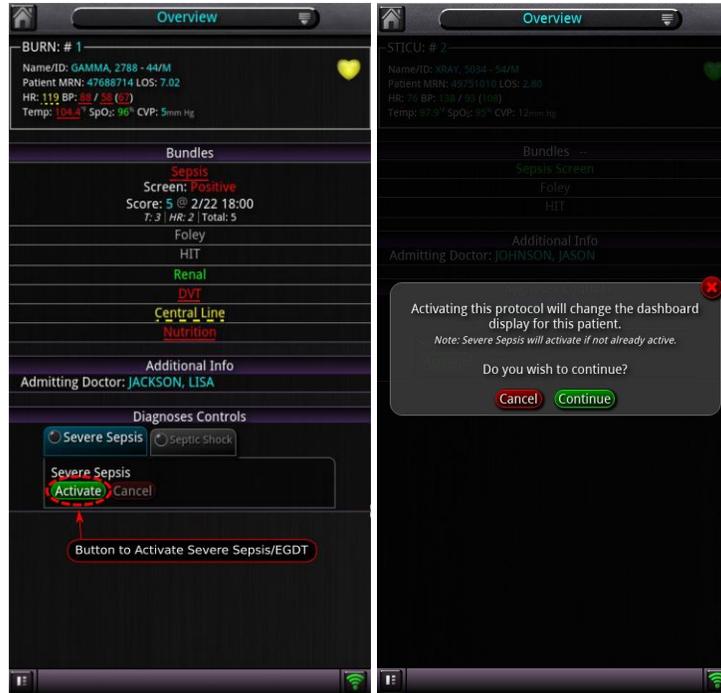


Figure 21a. The Mobile Patient Dashboard showing the “Activate” button. Pressing the Activate button will trigger the confirmation box to appear.

Figure 21b. The Mobile Patient Dashboard confirmation box. Pressing “Continue” will activate the protocol. Pressing “Cancel” will return to the screen shown in Figure 20a without activation of the protocol.

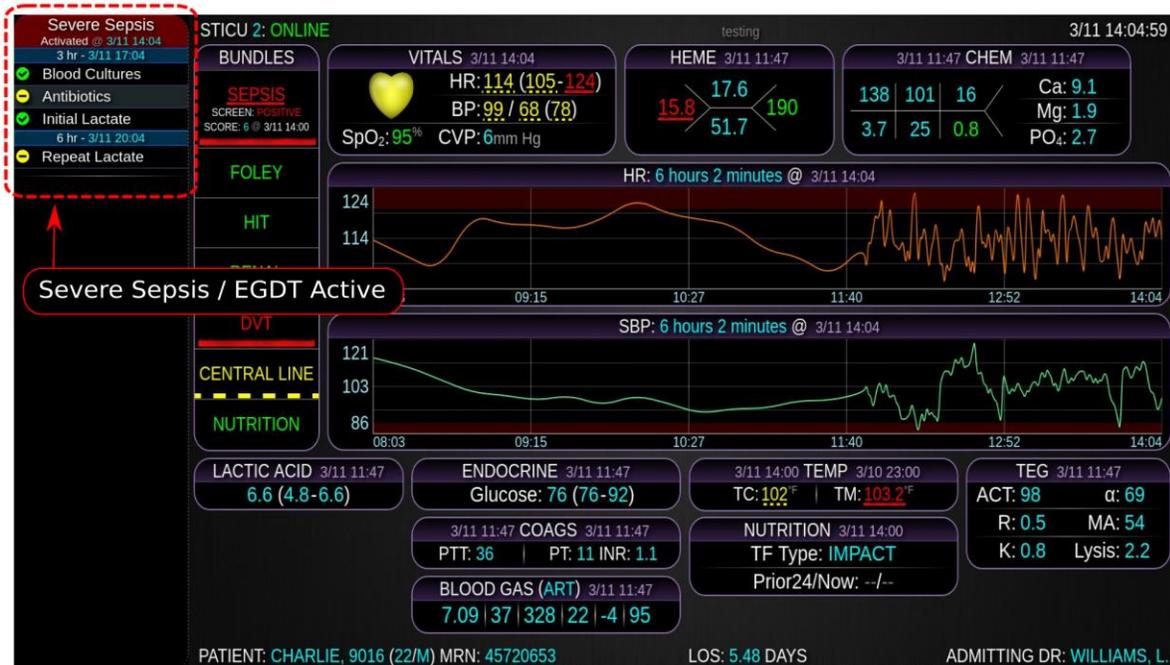


Figure 22. The Patient Dashboard with the activated severe sepsis protocol.



Figure 23. The mobile Patient Dashboard after the user has activated a protocol. The user may “Resolve” the disease state if the clinical diagnosis is no longer valid, or “Cancel” the protocol if it was triggered in error.

After resolving or cancellation, the mobile Patient Dashboard will display the user that resolved or cancelled the protocol (see **Figure 24**). At this point, a user may reactivate the protocol.



Figure 24. The user that resolved (or cancelled) the protocol will be displayed below the protocol name.

ACCESSING THE LABEL

To access the label on the application, click the “circle-i” icon on the login page (see **Figure 25**), index page (see **Figure 26**), WOW (see **Figure 27**) or mobile interface (see **Figure 28**) shown below. The data within the label will vary based on the region or country.



Figure 25. The login page shows the “circle-i” icon at the upper right corner of the Session Management block (left screenshot) which when clicked, will display the label (right screenshot).

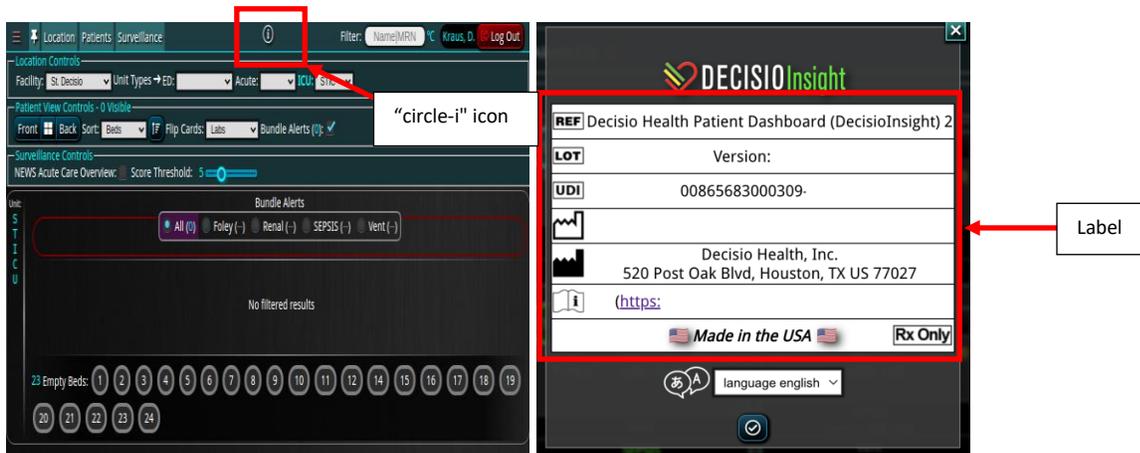


Figure 26. The index page shows the “circle-i” icon at the center and top of the page (left screenshot) which when clicked, will display the label (right screenshot).

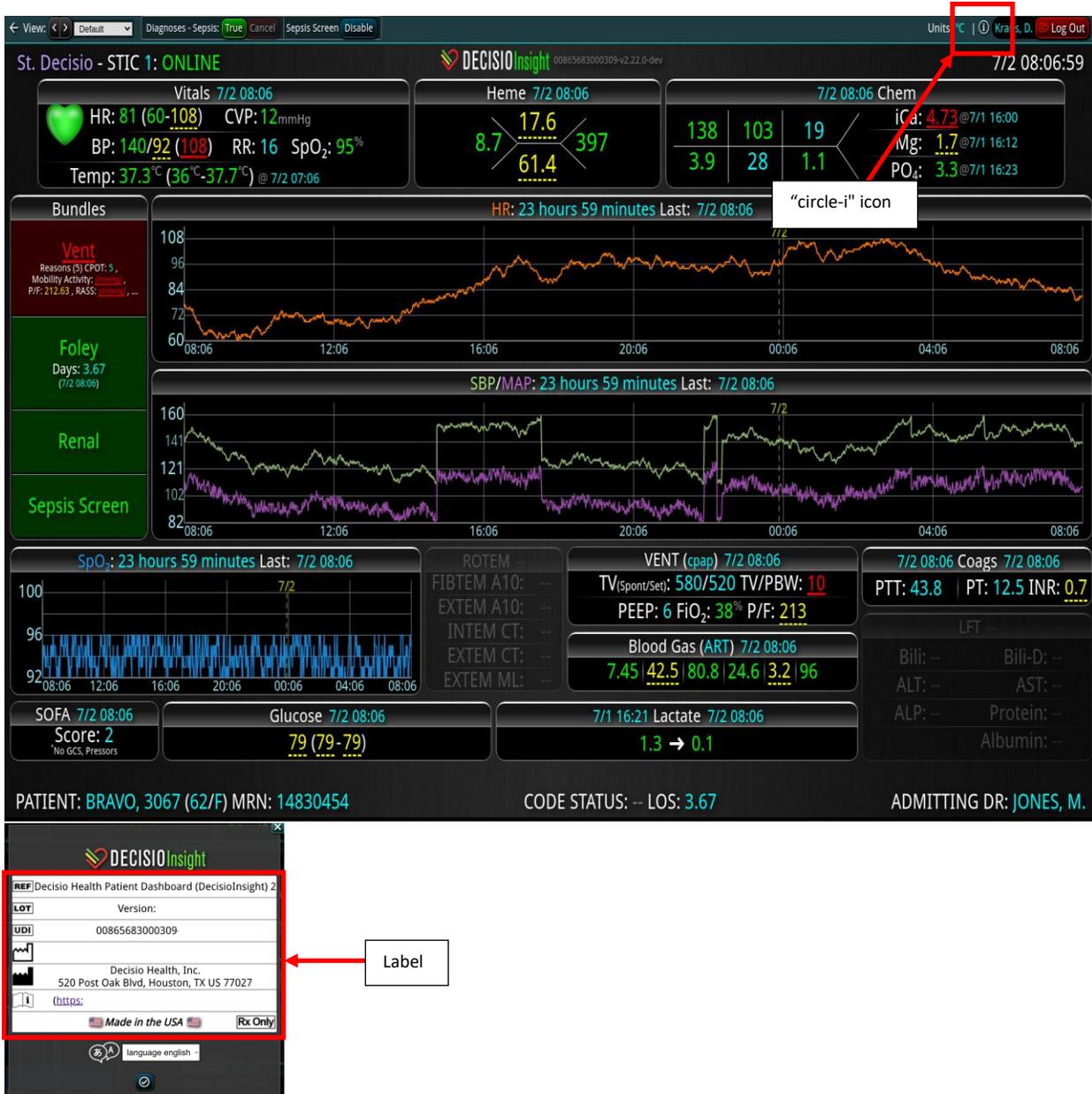


Figure 27. The WOW page shows the “circle-i” icon at the top right of the page between the units and user name (top screenshot) which when clicked, will display the label (bottom screenshot).

To access the label from the mobile interface, first click the menu icon at the bottom left of the index page. Then, the “circle-i” icon will be seen above the user name.

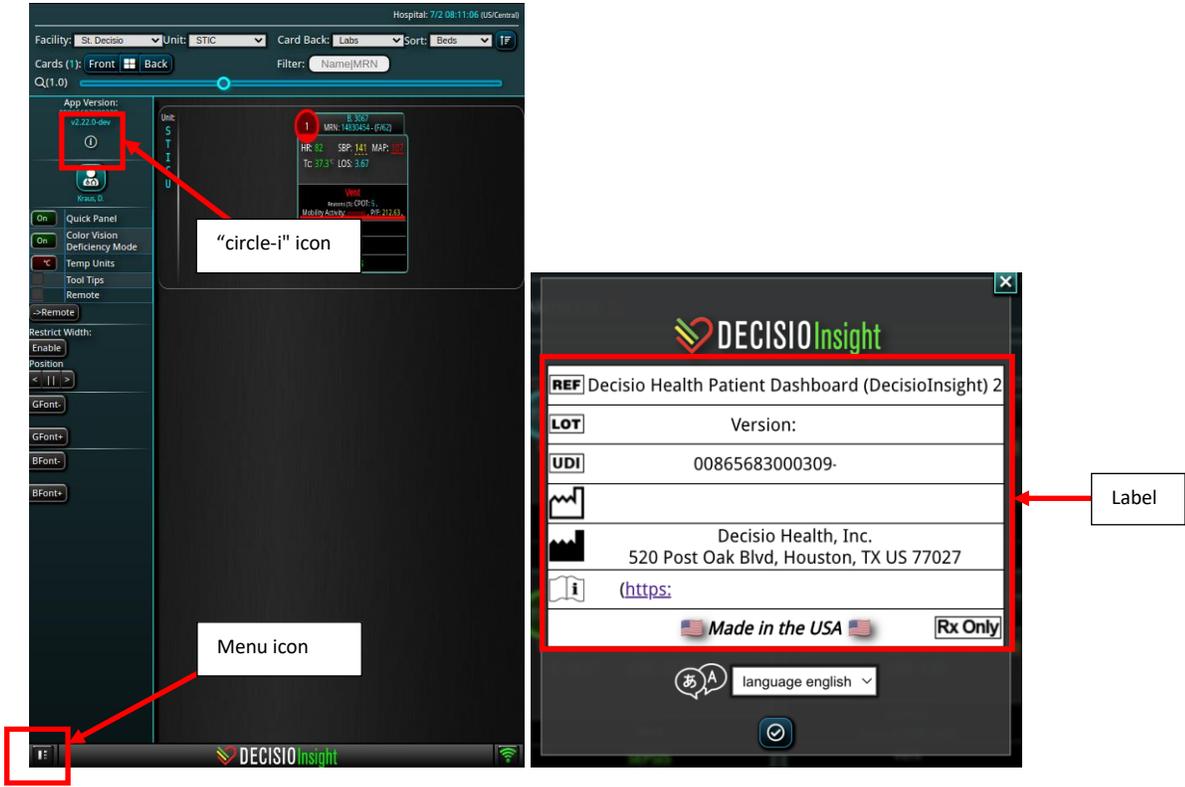


Figure 28. The mobile-interface shows the “circle-i” icon above the user name (left screenshot) which when clicked, will display the label (right screenshot).

TROUBLESHOOTING

This troubleshooting guide provides a list of commonly encountered errors. For any errors encountered not listed in this user manual, please contact your hospital IT staff. Below is a listing of potential technical difficulties (Problem 1-3).

Problem 1:

The Patient Dashboard displays a screen that indicates “SERVICE OFFLINE” (see **Figure 29**):

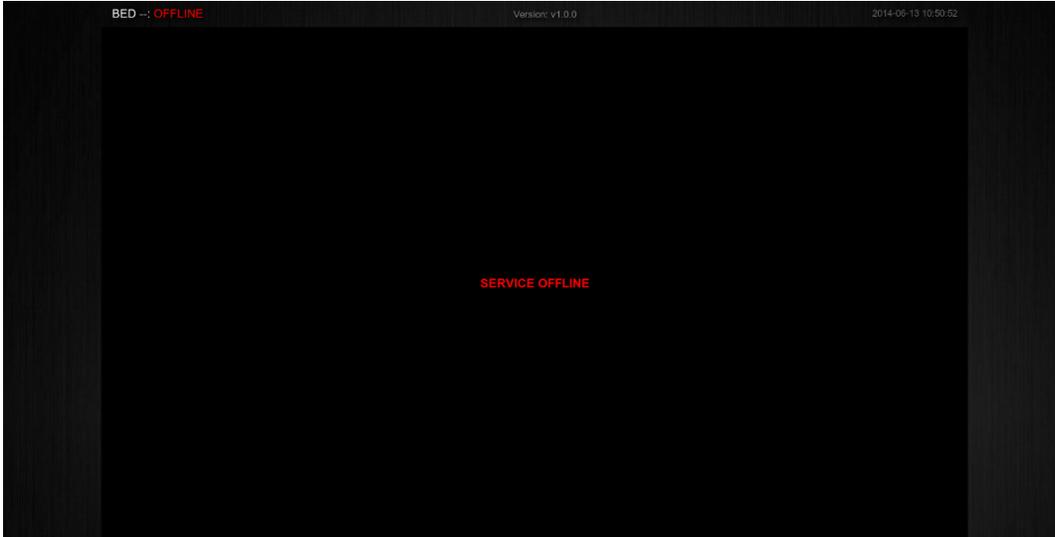


Figure 29. The Patient Dashboard is unable to connect to its server

Solution

The display should reconnect automatically to the network when it becomes available. In the event that the Patient Dashboard has not reconnected in 5 minutes, please contact your hospital's IT support staff.

Problem 2:

During normal operation of the Patient Dashboard the web browser terminates the Patient Dashboard. An error page will be displayed (see **Figure 30**).

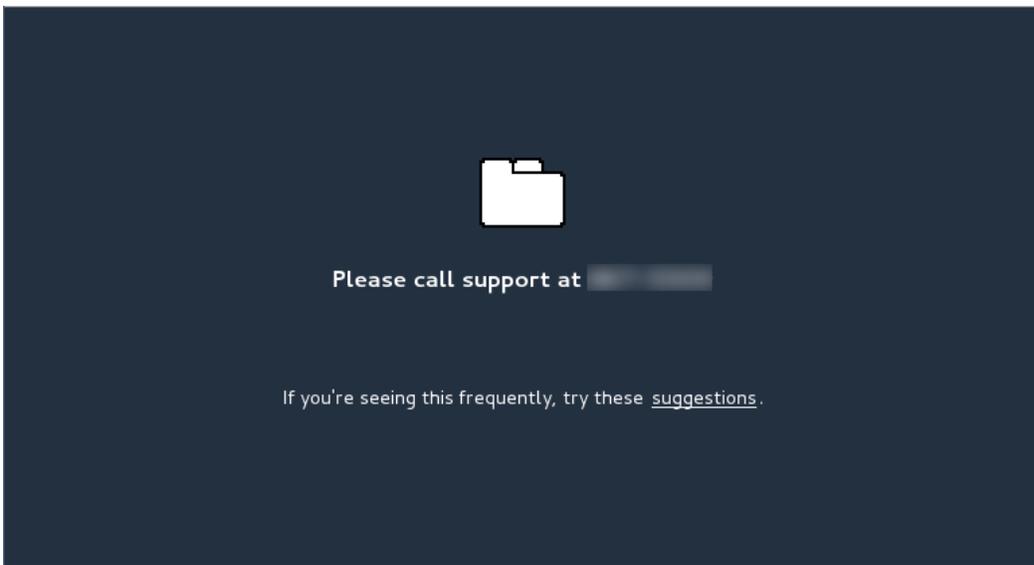


Figure 30. The browser has terminated the process running the Patient Dashboard (dark blue background)

Solution

Please contact your hospital IT staff.

Problem 3:

During normal operation of the Patient Dashboard the web browser crashes. An error page will be displayed (see **Figure 31**).

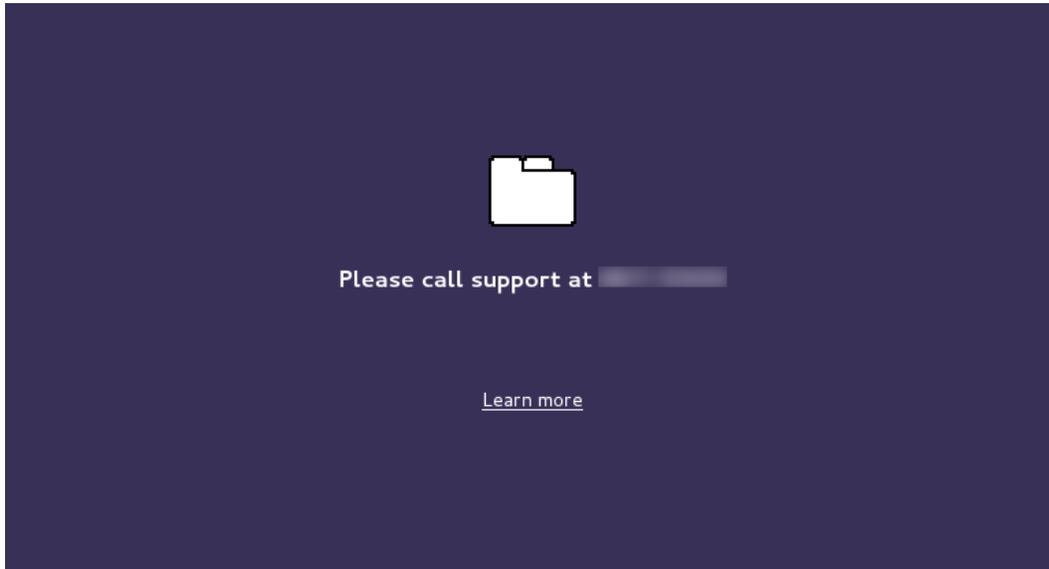


Figure 31. The browser has crashed while running the Patient Dashboard (dark purple background)

Solution

Please contact your hospital IT staff.

INSTALLATION

The installation of the Decisio Patient Dashboard first requires the digital infrastructure that allows for communication between the existing patient monitoring devices and the EMR that feeds information into the Decisio Patient Dashboard server. The digital infrastructure required to ensure that the Patient Dashboard is capable of running is summarized in **Table 3**.

Table 3: Compatibility Requirements

Element	Requirement
Data Input	Data from devices capable of exporting data in Standard Health Level 7 (HL-7) or XML Message format
Client Application Hardware Compatibility	Accessibility to Chrome / Chromium (operating systems for mobile and desktop)
Minimal Server System Requirements	<ul style="list-style-type: none"> • 200 gigabytes of free hard disk space • 8 gigabytes of system random access memory • Dual Core x86 / x64 Processor • 10 Mbit network connection to all devices • Run the Linux Operating System • Accessibility to hospital network • Accessibility to Internet

Element	Requirement
Other Facility Requirements	<ul style="list-style-type: none"> Facility must have an Electronic Medical Record (EMR) software capable of providing patient location, medical record number, name, and demographics through a structured textual (e.g., HL-7 messages) protocol Wired and wireless networking infrastructure inside the hospital that will allow access to the Patient Dashboard servers

During the installation process, the Patient Dashboard software is customized to the hospitals care and treatment protocols. The facility must determine which protocols it would like to have on the dashboard. The Decisio programming and customization team then digitizes those protocols; tests them with unit, integration, and system tests.

The facility IT then allows network access between the display devices (e.g., smartphone, tablet, laptop, desktop, and bedside TV monitor displays) and the Patient Dashboard to allow network traffic flow. Minimal compatibility requirements for display devices are provided in **Table 4**.

Table 4: Minimum Display Compatibility Requirements

Element	Compatibility Requirement
Mobile screen size (measure of diagonal)	4 Inches
Screen resolution	640X480 pixels

The implementation team at Decisio works with the hospital to create a customized dashboard based on the facility protocols and display needs of the department in which the Client Application is accessed. **Figure 32** illustrates a typical display used in an Emergency Department (ED). The server product takes normalized, stored data from the data sources listed above and presents that data, along with derived values on the dashboard.



Figure 32. Example of a Patient Dashboard display for Emergency Department

References for Abbreviations and Notation Used in the Patient Dashboard

Table 5: Abbreviations Used on the Patient Dashboard Client Application

Abbreviation	Meaning
HR	Heart Rate
RR	Respiratory Rate
BP	Blood Pressure
SBP	Systolic Blood Pressure
DBP	Diastolic Blood Pressure
MAP	Mean Arterial Pressure
TEMP	Temperature
DVT	Deep Vein Thrombosis
TBI	Traumatic Brain Injury
SUP	Stress Ulcer Prophylaxis
CVP	Central Venous Pressure
TV	Tidal Volume
PS	Pressure Support
PEEP	Positive End-Expiratory Pressure
FiO2	Fraction of Inspired Oxygen
PBW	Predicted Body Weight
P/F	PaO2 / FiO2 ratio
GCS	Glasgow Coma Scale
RASS	Richmond Agitation Sedation Scale
CAM	Confusion Assessment Method
CVL	Central Venous Line
A-line	Arterial Line
GI	Gastrointestinal
ID	Infectious Disease
FBG	Fibrinogen
PLT-fxn-Plavix	Platelet Function Assay - Plavix
PLT-fxn-ASA	Platelet Function Assay - Aspirin
LAC	Lactate
PCT	Procalcitonin
TNI	Troponin I
BNP	Brain Natriuretic Peptide
VANC	Vancomycin

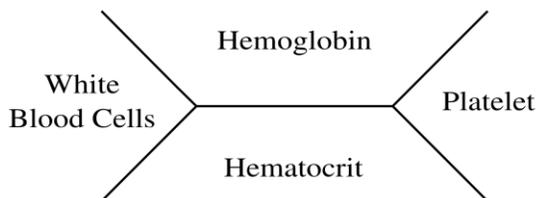


Figure 33. Complete Blood Count Shorthand Notation

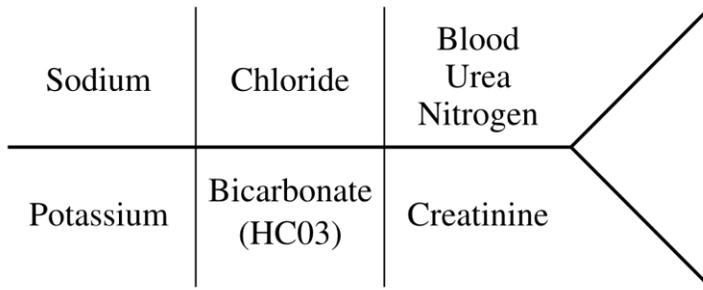


Figure 34. Chemistry Panel Shorthand Notation (also called, Basic Metabolic Profile (BMP) or Chemistry Panel

pH | pCO2 | pO2 | HCO3 | Base Excess | O2 Sat

Figure 35. Blood Gas Panel Shorthand Notation

Table 6: List of blocks and elements inside those blocks

Block Name	Common Elements
Vitals Block	heart rate with range, blood pressure, oxygen saturation, and central venous pressure
Pulmonary / Respiratory Block	ventilator settings, oxygen requirements, breathing trial results, extubation parameters
Infectious Disease Block	complete blood count, temperature, blood culture results
Renal/Foley/Lytes Block	chemistry panel, inputs and outputs, iv fluid rate, Foley catheter present
GI / Nutrition Block	nutritional status, tube feed type and rate, stress ulcer prophylaxis medication, nothing by mouth (NPO) status
Endocrine Block	glucose trend, insulin administration
Neuro Block	Glasgow Coma Scale, medication for sedation and agitation, pain score

Manufactured By:

Decisio Health, Inc.

520 Post Oak Blvd. Suite 600

Houston, TX 77027

Phone: 832-251-7664

www.decisiohealth.com

General Information Email: info@decisiohealth.com

Support Email: support@decisiohealth.com