



DECISIO HEALTH PATIENT DASHBOARD (INSIGHTIQ™)
USER GUIDE ADDENDUM – SEPSIS SCREEN BUNDLE

DOCUMENT VERSION: LB-20014, REV. B

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

SEPSIS SCREENING BUNDLE

The Decisio Health, Inc. Patient Dashboard (InsightIQ™) includes specialized monitoring for patients to assess for the presence of sepsis. This screening is based on peer reviewed literature for early identification of patients who may develop sepsis using basic physiologic parameters¹. The diagnosis of sepsis is based on clinician judgement and this tool is used to identify patient who may have sepsis. A positive result here should **NOT** be considered a definitive diagnosis of sepsis.

Table 1. Parameters used as part of the sepsis screening criteria

	0	1	2	3	4
Heart Rate (beats/min)	70-109		55-69 110-139	40-54 140-179	≤ 39 ≥ 180
Temperature (°C) Min Max	36-38.4	34-35.9 38.5-38.9	32-33.9	30-31.9 39-40.9	≤29.9 ≥41
Respiratory Rate (breaths/min)	12-24	10-11 25-34	6-9	35-49	≤ 5 ≥ 50
White Blood Cell Count (kcell / mm ³)	3-14.9	15-19.9	1-2.9 20-39.9		≤ 1 ≥ 40

Table 1 contains a list of all the elements used as part of the sepsis screening. Each value is assigned points based on where the parameters lies in the criteria. For example, a heart rate of 145 beats per minute is assigned a value of 3. Each category, after point assignment, is totaled. A total of 4 or more points is considered a positive sepsis screen.

The sepsis screen is calculated on a minute-by-minute basis. To reduce the number of false alarms, the heart rate and respiratory rate are averaged over a trailing thirty-minute basis.

Additionally, the temperature parameter will use the minimum and maximum temperature for the last 24 hours. It will use the higher score for each parameter. For example, if the patient has a temperature minimum of 35 °C (scored with 1 point) and a temperature maximum of 39.5 °C (scored with 3 points) it will use 3 points for the value for the total calculation. It will NOT combine the two scores.

¹ <https://www.ncbi.nlm.nih.gov/pubmed/19509612>



Figure 1. The index screen on the workstation on wheels. In this view, each patient in a particular unit is visible with a status for the sepsis screen.



Figure 2. A close up of a patient with a sepsis screen that is negative (green) on the left and positive (red) on the right. The components of the screen are displayed when the screen is positive. The components are abbreviated as follows: WBC – White Blood Cell Count; HR – Heart Rate; RR – Respiratory Rate; T – Temperature

In order to highlight these status changes, the sepsis bundle will trigger a bundle alert. This alert will “bubble up” to the top of the display on the index screen to highlight that the patient’s sepsis screen status has changed.

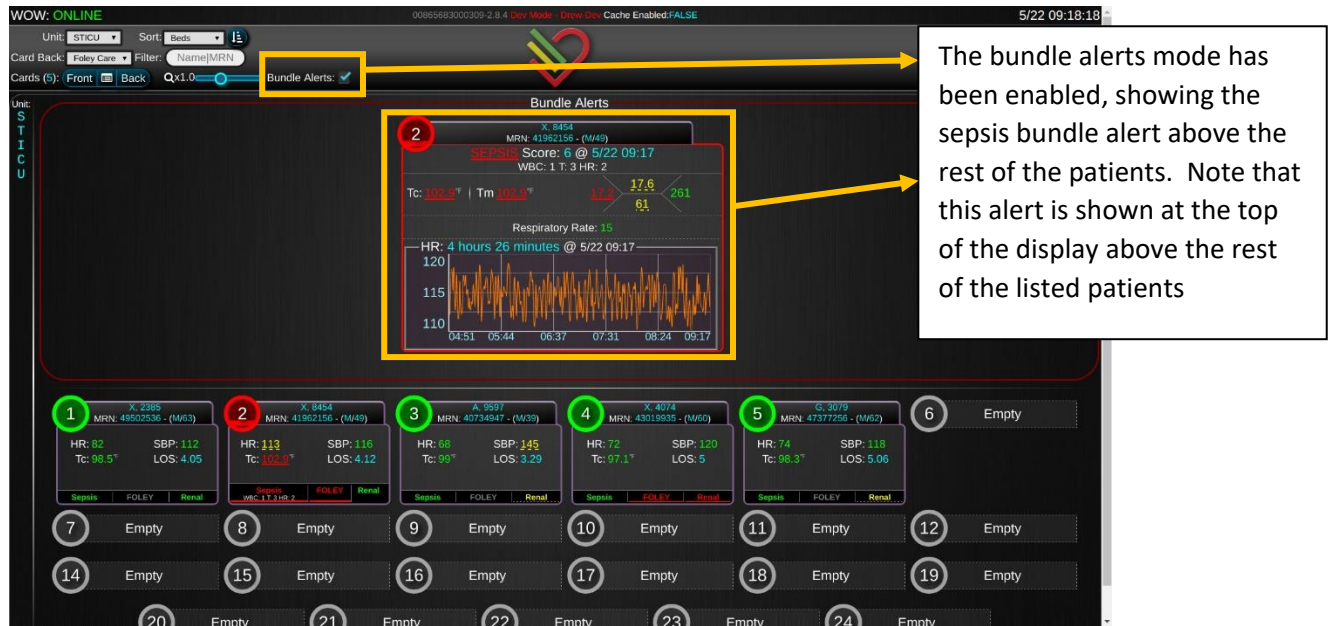


Figure 3. Bundle alert Index Page. The bundle alerts have been activated. Any patients with a positive sepsis screen will appear at the top as shown in the figure.

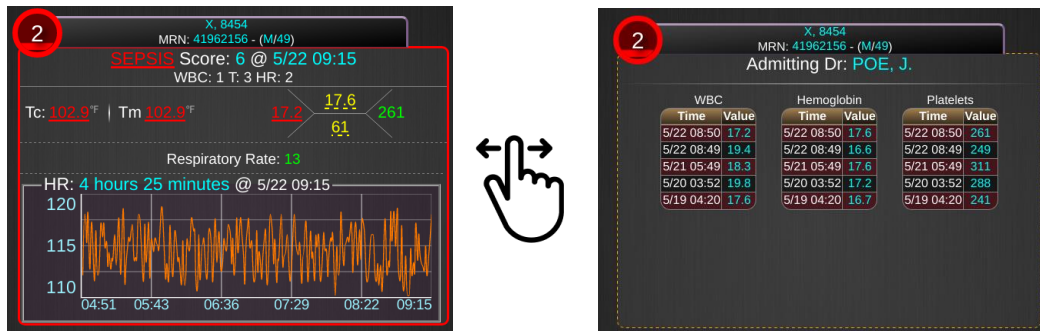


Figure 4. A zoomed in view of the bundle alert. In this view, the Sepsis score is shown at the top with the components below it. The temperature, white blood cell count, respiratory rate, and heart rate trend graph are also shown on the left view. The user can “flip the card” with the mouse by dragging across the front of the card with a mouse or finger (swipe). On the back the trends of White Blood Cell Counts are shown along with Hemoglobin and Platelets. The swipe motion can be used again to switch to the front of the card again.

The individual patient view is shown in **Figure 5**. This view contains the other information contained in the User Guide as well as the sepsis bundle displayed on the left.

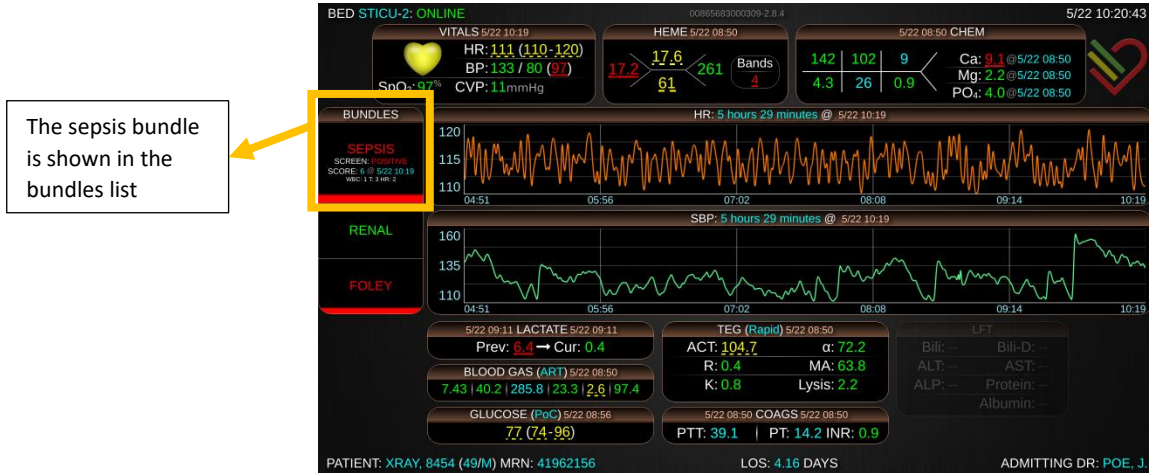


Figure 5. A dashboard view showing the sepsis bundle

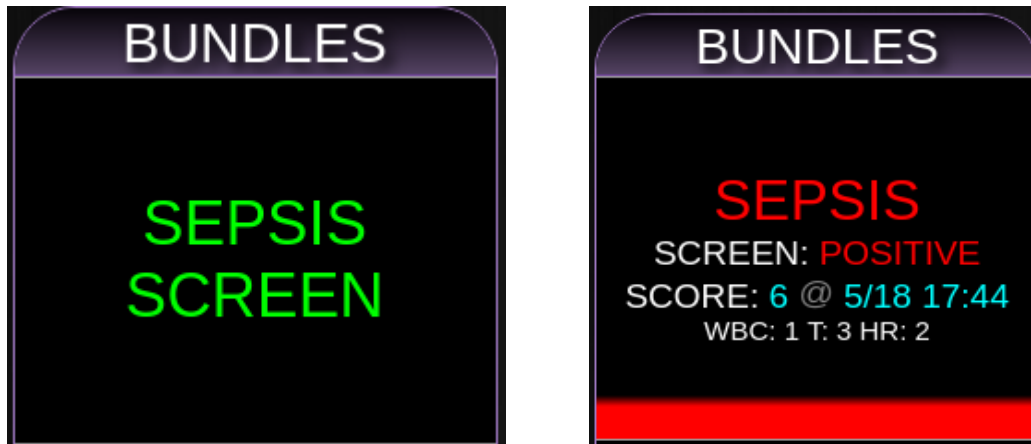


Figure 6. A zoomed in view of the bundles display. The left shows a negative (green) sepsis screen and a positive (red) sepsis screen. The components of the sepsis screen are shown with each respective score as well as a total score. The time displayed is the first time the sepsis screen calculated as positive (red).

Additionally, the Patient Dashboard has the ability to handle support interventions related to screening for sepsis. On the Workstation on Wheels interface, the Patient Dashboard shows controls to both silence the sepsis screen and to activate an intervention bundle (see **Figure 7a** and **Figure 7b**)

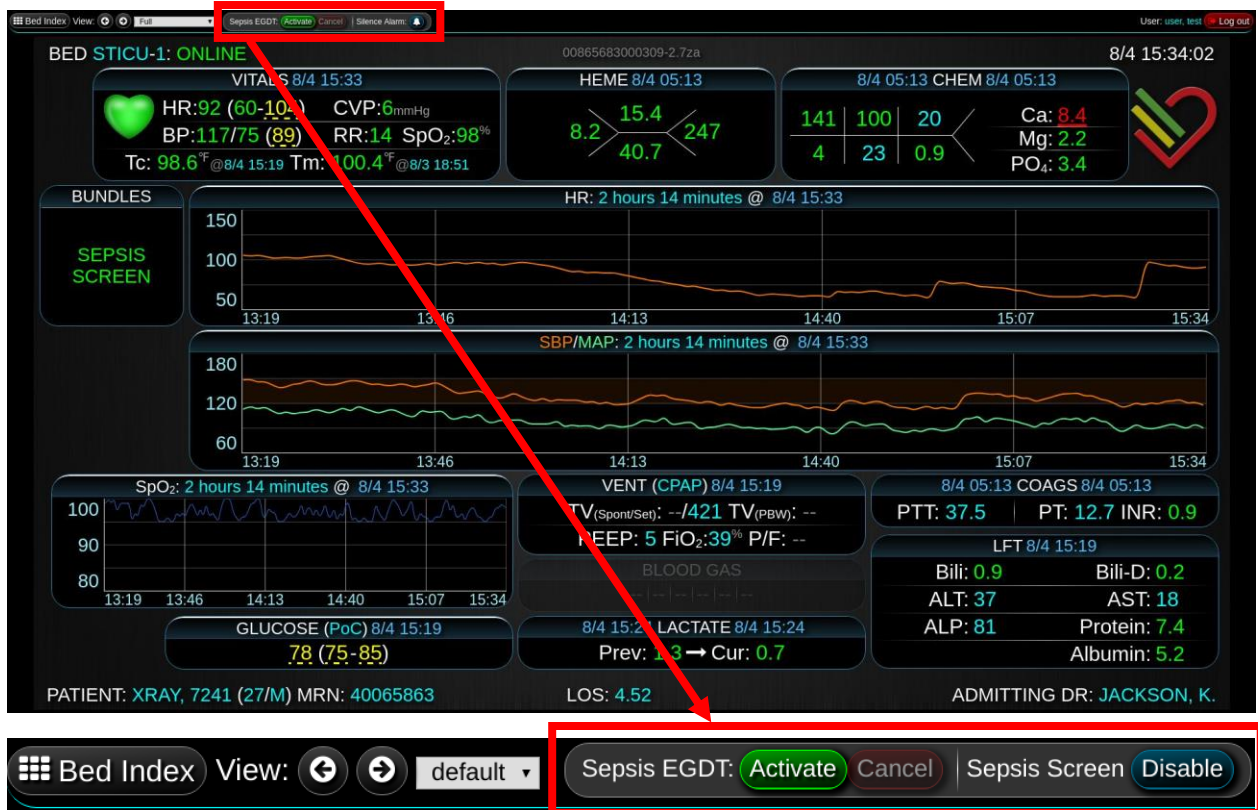


Figure 7a and 7b. The intervention bundle is highlighted at the top and a zoomed in version is below. This bar allows the user to activate a sepsis intervention bundle. Additionally, the sepsis screen can be disabled for a period of time set during the installation of the application.

Disabling the sepsis screen will then disable the sepsis screen from running for the hours specified at the time of installation. The user will be prompted with a confirmation dialog. This is shown in **Figure 8**.

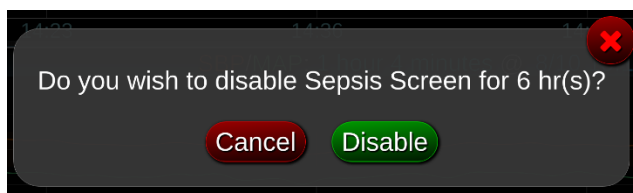


Figure 8. The confirmation dialog to disable sepsis screening for a specified set of hours. When the screen is disabled, the Dashboard will not update sepsis screening color coding regardless of changes in the patient's status.

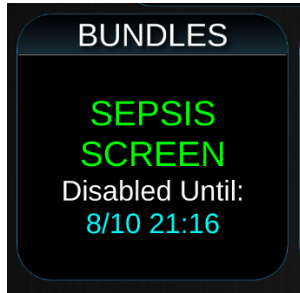


Figure 9. The sepsis screen has been disabled by the steps shown in Figure 7

If the sepsis screen is disabled, the user will be shown a bar as seen in **Figure 10**. Note that the Sepsis Screen “Disable” button has changed to “Enable”. The “Enable” button will allow the user to reactivate the sepsis screening process sooner than the requested expiration. By clicking, “Enable” the user will be prompted with a confirmation dialog box (see **Figure 11**).



Figure 10. The sepsis screen has been disabled. The user may re-enable sepsis screening by clicking the “Enable” button. The “Enable” button will immediately start the sepsis screening process.

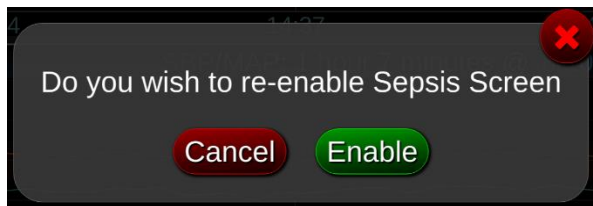


Figure 11. After the user has chosen to disable sepsis screening

ACTIVATING EARLY GOAL DIRECTED THERAPY INTERVENTION BUNDLE

Enabling the Early Goal Directed Therapy intervention block requires clicking the activate button shown in Figure 7b. Doing so will prompt the user to confirm that the intervention bundle has been requested (see **Figure 12**).

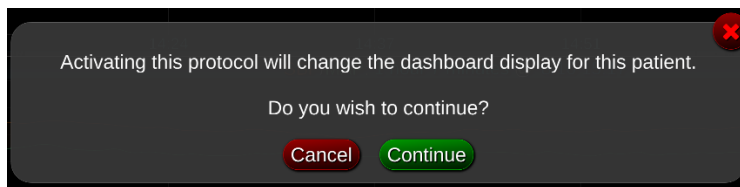


Figure 12. Activating the early goal directed therapy bundle requires that the user confirm that he/she wants to activate this bundle. The “Continue” button will start the early goal directed therapy bundle while “Cancel” button will return to the normal state.

The early goal directed therapy block will appear on the left after activation as shown in **Figure 13a** and **13b**.

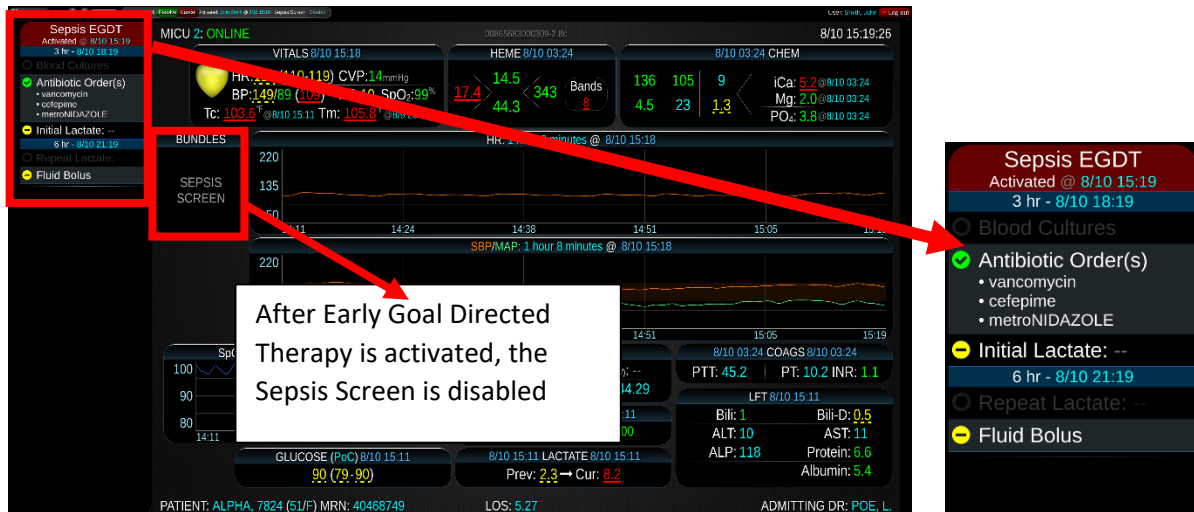





Figure 13a and Figure 13b. The two images show the activated sepsis early goal directed therapy block. This intervention bundle is designed to help the clinician keep track of what has been performed and what has not been performed for the management of sepsis. When the early goal directed therapy bundle is activated, the sepsis screen will be deactivated as shown in Figure 13a.

The Early Goal Directed Therapy intervention bundle uses a color and image convention to show what has been performed and what has not been performed. This color and image convention is shown in **Table 2**.

Table 2. Early Goal Directed Therapy Color and Image Conventions

Item in the Early Goal Directed Therapy Panel		Item Meaning
		This element has been performed
		This element has NOT been performed and the recommended time window to perform it has NOT expired
		This element has NOT been performed and the recommended time window to perform it has expired

After Early Goal Directed Therapy has been activated, the user can resolve the early goal directed therapy bundle or cancel the bundle if it was activated in error as shown in **Figure 14**. The activation time will also be present on this bar.



Figure 14. After activation of the Early Goal Directed Therapy Bundle, the user has the ability to resolve Sepsis EGDT if the sepsis management bundle is complete. In addition, the user can cancel Early Goal Directed Therapy if it was started in error.

Resolving Early Goal Directed Therapy requires that the user confirm the change (**Figure 15**). Cancelling Early Goal Directed Therapy also requires that the user confirm the cancellation (**Figure 16**).

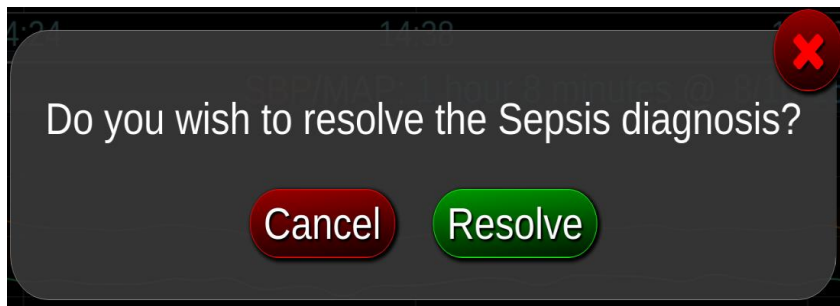


Figure 15. Resolving the sepsis EGDT block requires confirmation by the end user.

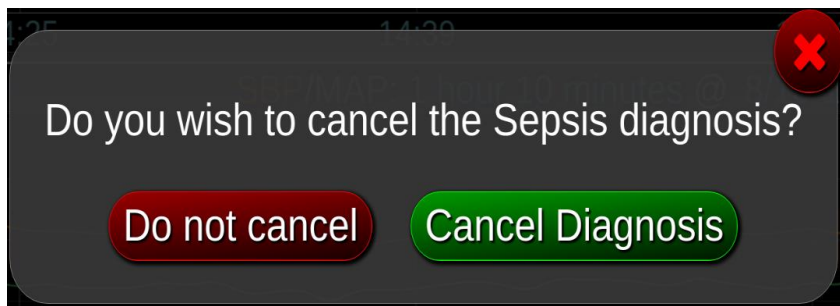


Figure 16. Cancelling the sepsis EGDT block also requires confirmation by the end user.

Note that the Early Goal Directed Therapy block will remain present until the user selects the cancel or resolve button.

After resolution or cancellation, the display will resume its normal appearance. The sepsis screening protocol will begin calculation immediately.

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