USER GUIDE Version 1.0

Indication for Use:

EndoTool SubQ is a software application for use by trained healthcare professionals to calculate and recommend an individual patient's next dose of insulin to be administered subcutaneously to manage blood glucose levels in patients with Diabetes Mellitus in both adult and pediatric patients (age 2 years and above and 12 kg or more). The software is designed to recommend the insulin dose(s) and when indicated a carbohydrate dose based on the prescribing healthcare provider's nutritional regimen, insulin regimen, target glucose range, and patient specific characteristics.

The EndoTool SubQ Glucose Management System is not a substitute for clinical reasoning but an aid for trained healthcare professionals based on obtained glucose readings and entered clinical data. Final dose recommendations for a patient must be made only after consideration of the full clinical status of the patient. No medical decision should be made based solely upon the results provided by this software program.

CAUTION: Federal (USA) law restricts this device to sale by or on the order of a physician or other licensed healthcare practitioner.

For assistance, please contact your facility's IT department

Or

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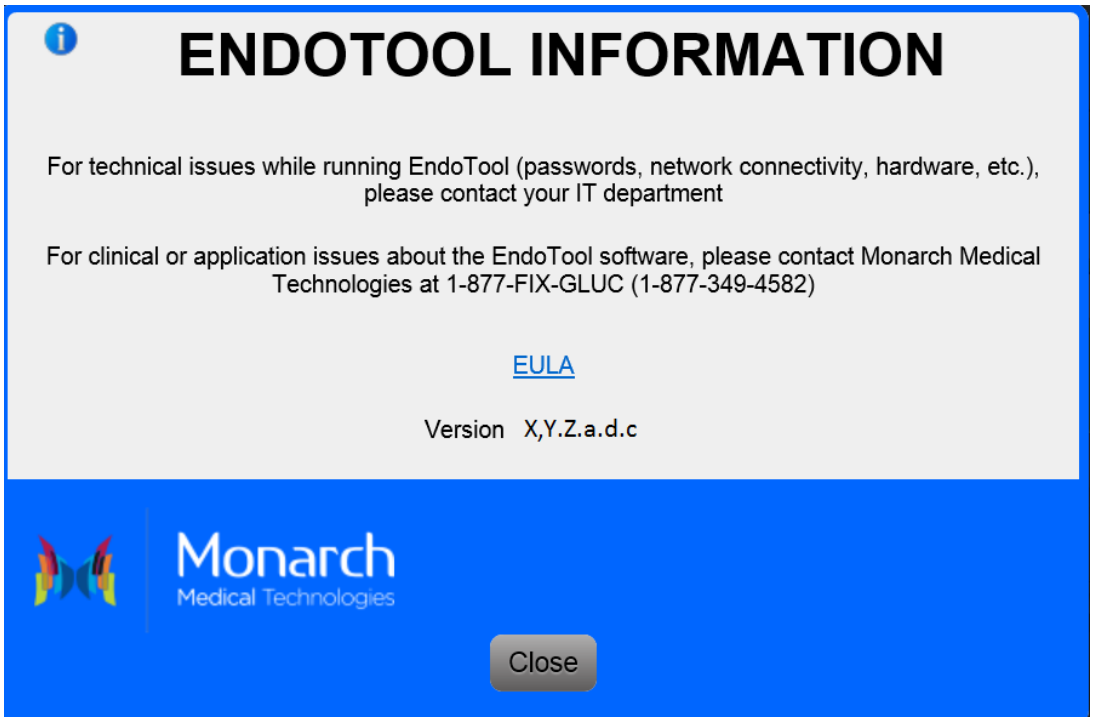
24/7 Clinical Support

Introduction

The EndoTool® SubQ Glucose Management system includes: security features, software, and technical support features. Each user has an individual User Identification (ID) and Password in order to access portions of the application. EndoTool SubQ is designed to safeguard the confidentiality, integrity, and availability of electronic protected health information of patients according to the Health Insurance Portability and Accountability Act (HIPAA) privacy rules.

EndoTool® SubQ is packaged in a user friendly, stand-alone program. The application is installed on Windows Server 2008 R2 or newer. The end-user should access the application using Internet Explorer 8 or higher. The application was developed for use on Personal Computers (PCs), network servers, and terminal server environments. As EndoTool data is time sensitive, it is also imperative that all PCs and servers be set with the correct date and time using UTC.

EndoTool SubQ can utilize barcode scanning in Code 39 format (also known as Alpha39, Code 3 of 9, Code 3/9, Type 39, USS Code 39, or USD-3) for patient identification/verification.



Contents

1 Accessing EndoTool SubQ

To access Endotool select the desktop icon or access by a web link provided from the EMR or other system. Desktop icon examples shown here:

1.1 Application Log in and Security

Each user must have a unique User Name and Password. These are typically maintained by the Facility IS department. EndoTool uses the assigned Active Directory (AD) account for authentication. The software can use a direct authentication method, and separate passwords can be maintained at the application level, however for best workflow practice, this is not recommended.

2 Symbols and Icons:

Help, Information, Advisories and Warnings

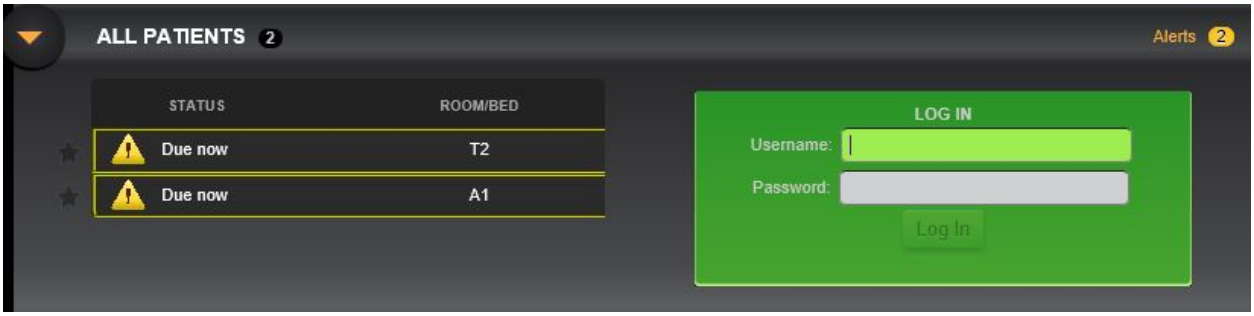
	Access the On-Line User Manual. This is made available from the Dashboard to all users
	This information option provides tips or other important material that can help you better understand EndoTool, it can further explain the actions you need to perform for its effective use
	Advisory Flag: This alerts you to a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also alert you against unsafe practices and provide guidance to avoid injury as a result of misuse.
	Warning Flag: This information alerts you to a situation which, if not avoided, could result in death or serious injury. It may also describe potential serious adverse reactions and safety hazards. This flag is also displayed when critical required information has not been entered.

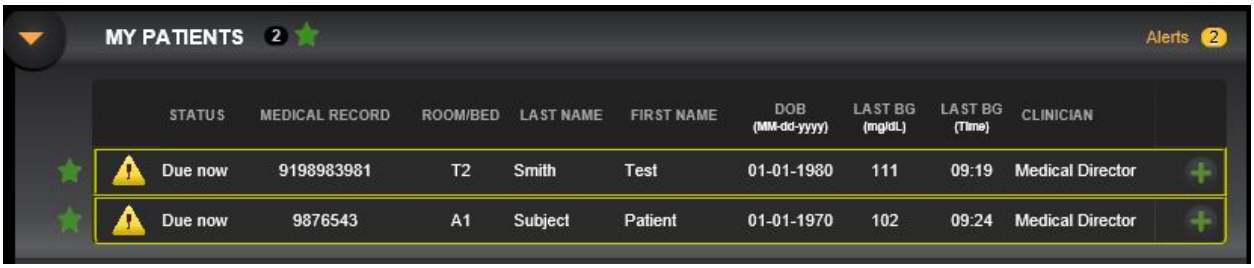
3 Dashboard

Dashboard is the main screen that displays when EndoTool SubQ is first opened. All fields except Facility and Unit are locked until a user has logged in.

3.1 Dashboard Login

Prior to Dashboard login a Facility and Unit must be selected. The last selected Facility and Unit will be stored as a defaults for the logged in user on that PC. The Facility and Unit are changed by use of the dropdown menu. The display will indicate the successful selection and allow for the user to login into the application. The Dashboard is designed to hide PHI (private healthcare information) prior to login, once login is complete PHI for patients on the work list is displayed.





3.2 Dashboard Fields

Field Name	Description
	FACILITY – Verify or select the facility Preselected if no other facilities are available
	UNIT– Verify or select the unit Preselected if no other unit is available
	Login / Logout Displays user Names after login Select User Name to Log out of Endotool
	Audible alert control Turns on/off audible. Audible default is set to *on*. Control is user specific
	Barcode Initiates barcode scanning for patient selection and verification
	EndoTool Analytics A data reporting tool. Availability is dependent upon user credentials
	Dashboard Navigates to the Dashboard. Displays number of alerting patients.. Displays alerting patients in the All Active Patients list and My Patient list.

Field Name	Description
	Patient Details Opens last patient accessed by user
	Help Link to this EndoTool SubQ User Guide
	Favorites Star Adds or removes patient(s) to MY PATIENTS work list Green-patient is added to My Patients Grey –Not selected

3.3 Barcode Scanning

Barcode – Initiates barcode scanning for patient verification. This feature can be used to select your patient, or add a new patient to the system.

4 Navigation and Information

4.1 Buttons

- Selecting the appropriate Button for the desired action after confirming information, entering necessary information, or completing an actions. *Some buttons will only be active when the required information or conditions have been entered and / or completed.*
    - **Cancel /** Back – Returns user to the previous screen or Dashboard. Accordion Headers

Accordions are collapsible sections within the application which can be opened or closed vertically.

4.2 Scrolling

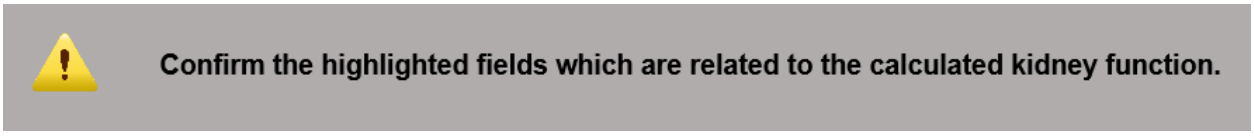
Depending on PC and screen settings, scrolling up or down may be necessary to navigate to a desired section within the application.

4.3 Warnings

Highlighted Red warning bands appear in the input boxes when mandatory fields are left blank, or when the entry has not met or has exceeded a threshold or an entry requires a secondary confirmation. A warning banner will also appear to assure safe use and/or the accuracy of the data being entered.

4.4 Advisory Screens

Highlighted Yellow warning bands appear when the data is requires a second confirmation. Advisory screens provide additional information and are designed to highlight values outside the medical director thresholds. These screens require user acknowledgement of the information, verification of information accuracy, or as a reminder to complete a step.



4.5 EndoTool additional Information

Additional information can be accessed by clicking on the information icon throughout the application.

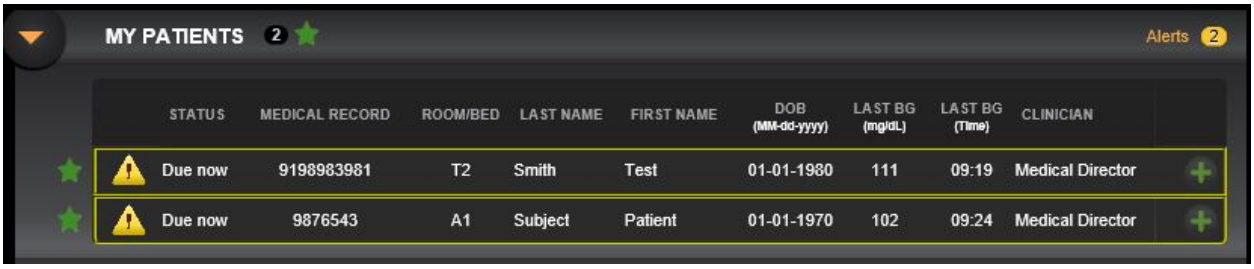
5 Alerts

EndoTool provides both Visual and Audible alerts to indicate when blood glucose checks are due or are past due when the Dashboard is actively displayed.

5.1 BG Due Visual Alerts:

- **On each p**atient list header (MY PATIENTS and ALL ACTIVE PATIENTS) an Alerts area on the right side of the display shows the number of patients in that list that have a glucose due, or past due.

- **By patient row**: Each patient row lists the patients next expected glucose time (Due at LUNCH) in the Status column. The row is highlighted in orange to indicate the patient has a glucose check currently due. The row is highlighted in red beginning at one minute past the designated meal time frame. For example: If lunch typically occurs between 1100 and 1300 the row would turn red at 1 minute past the time lunch end,0 if a meal/glucose entry has not occurred.



The Dashboard Icon displays the number of patients with active alerts and is dependent on how patient lists are set up by an individual user:

- If the My Patients list is populated the alerts will display on the Dashboard icon for only those patients.
- If the My Patients list is empty the Dashboard icon will display alerts for all active patients in the unit.

5.2 Audible Alerts:

Audible alerts sound when a patient's BG is due in approximately 5 minutes or less (depending on the facility/unit settings). Audible alerts stop when blood glucose entry is completed.

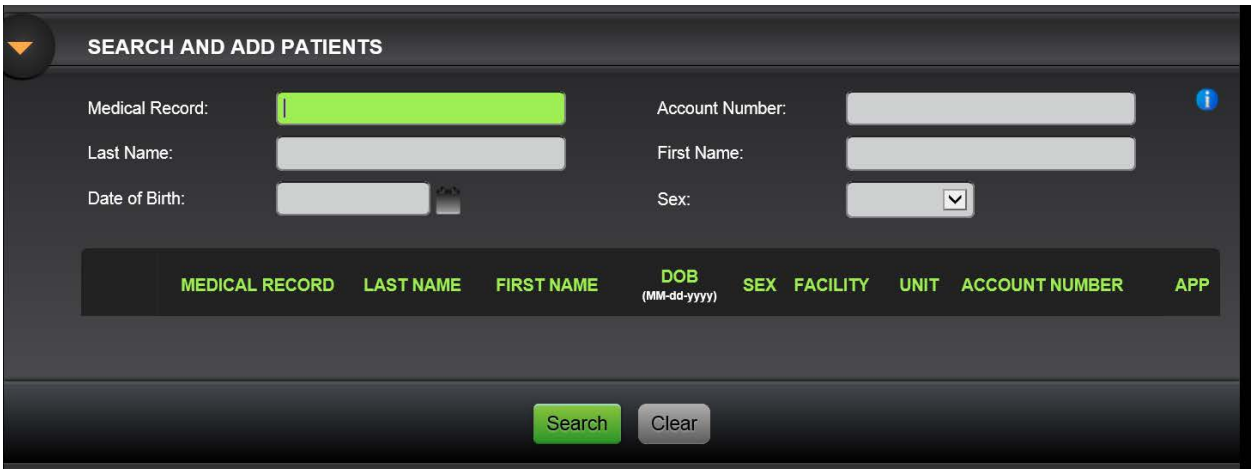
In order for audible alerts to be active EndoTool SubQ must be open on a computer with functional, non-muted speakers and volume control set appropriately.

6 Search and Add Patient

1. Select Search and Add Patients from the Dashboard.
2. Enter search criteria.
    - The preferred method is patient's primary identifier (account number, medical record number, etc.). When searching by this method, no other fields may be used for the search. This is the top left field on the screen.
    - You can search by any combination of name, gender, and date of birth.

If the facility is using the scanning feature for patient selection/verification, click the Barcode Icon and scan the patient's wristband identification number.

If the patient verification feature is turned on, selecting a patient that is already on EndoTool SQ in your unit from the My Patients or All Active Patients list will open the barcode scanning window.



6.1 ADT Interface

If the facility is using an Admit/Discharge/Transfer (ADT) interface and the patient is not found, the patient may be activated in Endotool Manually.

It is not recommended to active patients manually unless it is an emergency situation, as merging of patient information from improperly entered demographics is not possible.

6.2 No ADT Interface

If facility is not using an Admit/Discharge/Transfer (ADT) interface, all patients will be entered manually.

6.3 Adding a Patient

Select patient by clicking on the plus  icon.

When multiple patients are found, select the correct patient based on the patient's unique identifiers (age, gender, DOB, etc.)

6.4 Selecting an Active Patient from the SubQ Dashboard

Log in and select the patient by clicking the  to the right of the patient name or by double-clicking the patient row.

6.5 Starting a Patient on Endotool SubQ

6.6 Patient Information, Protocol and Nutrition

To start a patient on EndoTool SubQ, the user must complete all required Patient Information fields, Nutrition and Protocol selections that apply and confirm the input data.

6.7 Patient Information

Some fields will be pre-populated if facility is using an ADT interface. Ensure that data is correct. If a discrepancy exists, contact your facility patient registration or IT department for assistance.

A name Alert will appear when patients with similar names are identified on the Dashboard.

Warnings and/or Advisories may appear if required fields are blank or if the entry is outside of expected ranges.

6.8 Patient Information Fields

Field Name	Description
Medical Record	The medical record number will be pre-populated from the *Search for Patient* screen. *This field may be labeled differently if applicable at your facility (i.e. Medical Record, PTID, FIN, or Visit ID).*
Account Number	Enter the patient's account number if applicable. *This field may be labeled differently at your facility (i.e. FIN or Visit ID) or may not display at all.*
Last Name	Enter the patient's last name.
First Name	Enter the patient's first name.

Attending Physician	Enter the name of the attending physician. *If using an ADT interface the user may be able to select the attending physician from a dropdown list, or type in the physician information, which adds the physician to the list.*
Birth Date	Enter Birthdate. MM/DD/YYYY – this is used to calculate and display current Age *When using the calendar feature, select the year first, then month and day.*
Weight (kg)	Enter the patient's weight in Kilograms (Kg).
Height (in)	Enter the patient's height in Inches, the system will convert to centimeters (cm)
Room/Bed	Enter the patient's room number. This must be unique for patient safety
Sex	Select patient physiological sex M or F
Type of DM	Select the patient's Diabetes Mellitus (DM) status from the dropdown list: **0-Non DM:** patient has no history of diabetes or is undiagnosed. **1-Type 1:** patient has a diagnosis of Type 1 diabetes. 2-**Type 2:** patient has a diagnosis of Type 2 diabetes. **Gestational:** patient has gestational (pregnancy induced) diabetes. **Unknown:** patient is unable to communicate and no medical history regarding diabetes is available.
Creatinine (mg/dL)	Enter the patient's current creatinine value.
HbA1c %	Enter the last HbA1c if available (optional field)

Patient Info Input Screen

6.9 Nutrition

The nutrition fields require the user to provide dietary and carbohydrate intake information including IV infusions containing dextrose. Complete only those fields that apply to the patient's current orders.

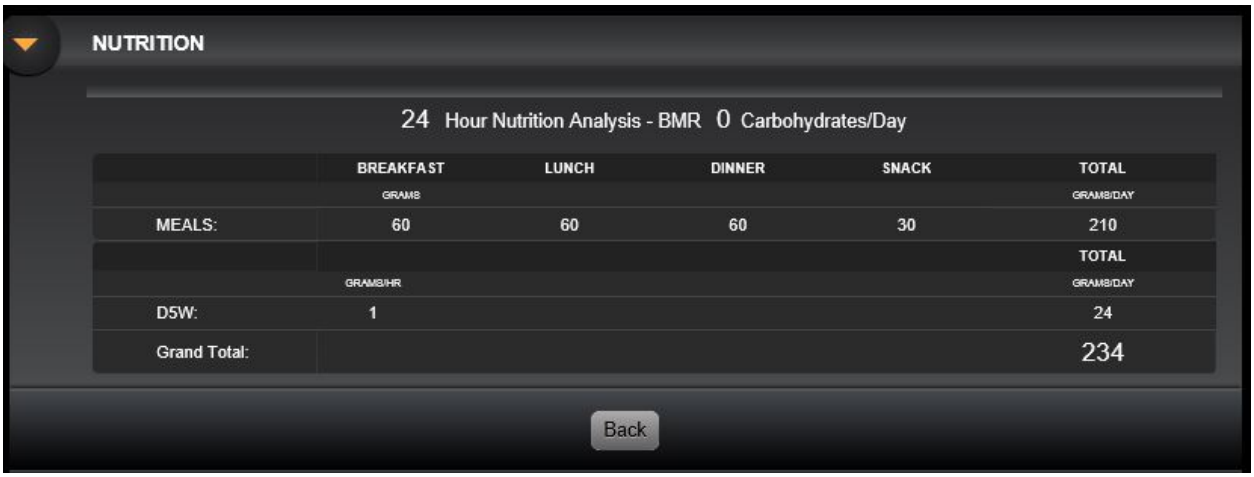
6.10 Nutrition Fields

Field	Description
Intermittent Nutrition	
Meal Plan (Diet)	Select the meal plan (diet) ordered from the dropdown
Bolus Tube Feed Product:	Select the Product from the drop down, then enter the volume and frequency as ordered.
Continuous Nutrition	
Dextrose:	Select the D5 or D10 solution from the dropdown and then enter the administration rate.
Tube Feeding Product:	Select the Product from the drop down, then enter the administration rate.
TPN:	Provide the % Dextrose of the TPN, rate, units of insulin in units and total volume of the TPN solution in mL *When the value enter into the insulin field is greater than 0 the application displays a unit/mL calculation as an additional safety check*

Nutrition Input Screen

6.11 View Plan

To review a comprehensive display of the patients planned nutrition, select the View Plan button:



6.12 Protocol

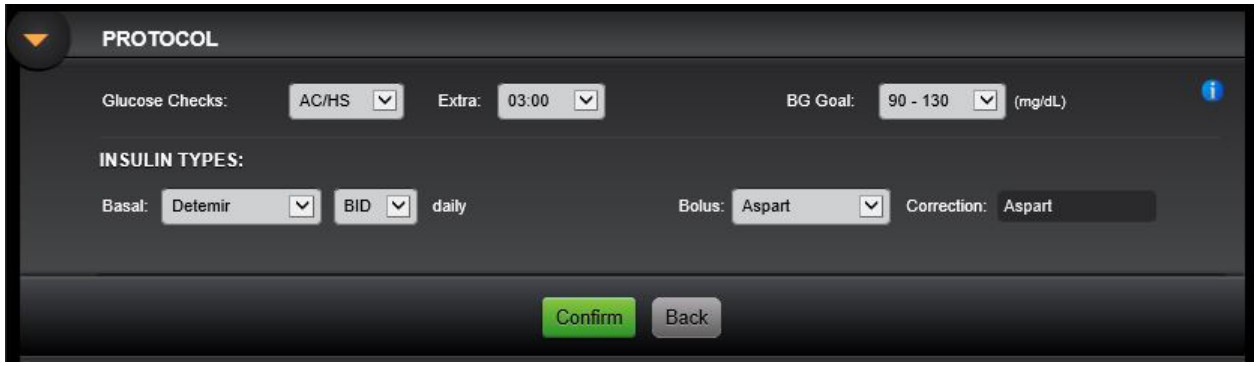
The protocol and Insulin type input fields require the user to provide the system with the physician orders for glucose check timing and the Insulin types and frequency to be used in the determination of the dosing recommendations.

6.13 Protocol Fields

Field Name	Description
Glucose Checks	Select from the dropdown the appropriate schedule for glucose checks.
Extra	If ordered by a physician an additional glucose check can be selected by selecting the appropriate time.
BG Goal (mg/dL)	Select range of glucose control. *Verify against physician's orders if more than one range of control can be selected.*
Insulin Types	
Basal	Select Long Acting Insulin ordered by physician
Basal Frequency	Select Once, BID as ordered
AM/PM	Select AM or PM when Basal insulin is ordered Once
Bolus	Select Short-acting insulin ordered by physician

Correction	This will automatically populate with the same selected Bolus insulin.

Protocol Input Screen



7 Start/Restart

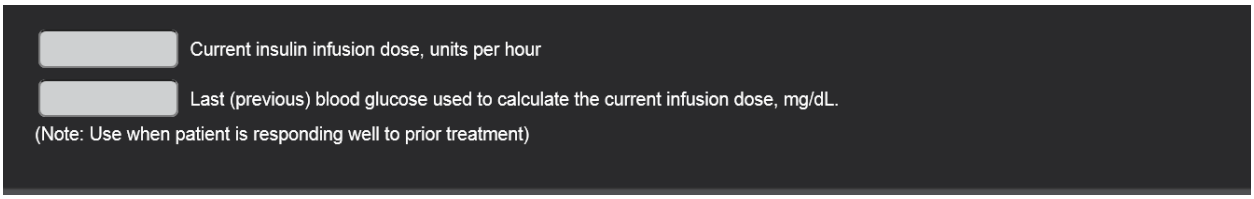
The Start/Restart dosing option allows the user to select from the options displayed additional information which will be used to determine the initial dosing model. Click on the appropriate choice toi start the dosing Model.

You must select **Yes or No** for the question “Has the patient revieved iV or Oral steroids in the past 24 Hours before you can Confirm and continue.

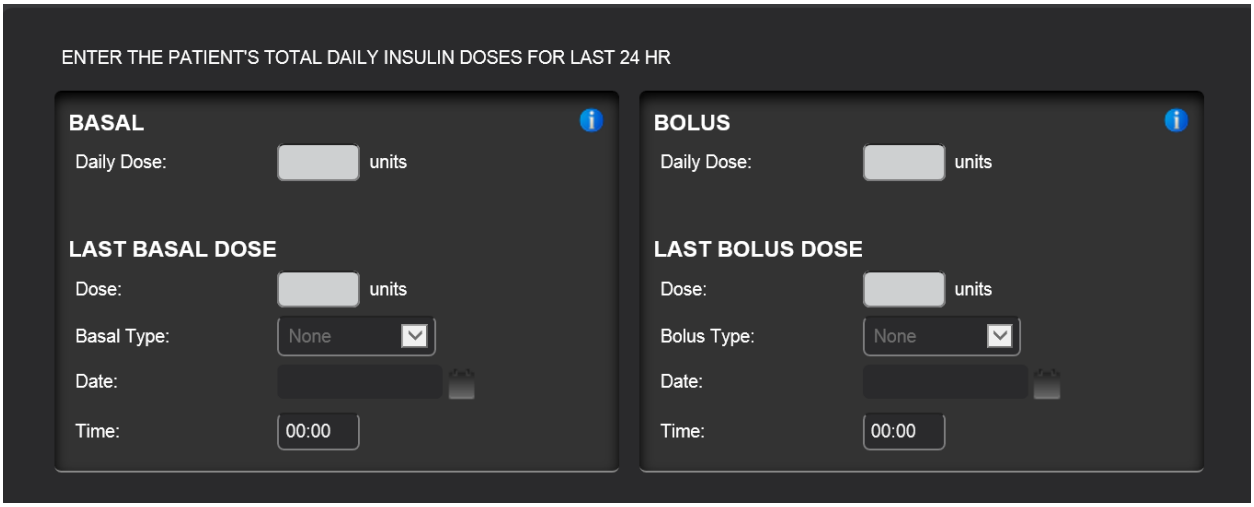
7.1 Start/Restart Icons and Fields

Field Name	Description
EndoTool to Calculate	EndoTool SubQ determines the dosing model based on the patient information, protocol and expected carbohydrate intake provided.
From Last SubQ Entry	Restarts insulin therapy based on previous dosing model at the time EndoTool SubQ was last active for the patient. This is used when the patient has been temporarily removed from EndoTool. Note: This option is available for only 72 hours after the last BG/Carbohydrate entry when a patient has transferred units or was discontinued on Endotool.
From IV	Determines the starting model based on the previous glucose reading and current Insulin drip rate. Use when a patient is transitioning from an IV insulin infusion. Enter the following information: Current Insulin infusion rate and Last (previous) BG Check used to set rate. *It is also acceptable to use **EndoTool to Calculate** when a patient is transitioning to EndoTool SubQ from a different IV insulin protocol.*
From SubQ	Uses the patient's TOTAL scheduled subcutaneous Basal/Bolus dosing orders to calculate the initial model. Enter the following information into the appropriate fields: **Total** basal insulin units per day. **Total b**olus insulin units per day. **Last** basal dose amount, date and time. **Last** bolus dose, amount and time Note: This does not include Correction insulin, only Basal/Bolus insulin. *It is also acceptable to use **EndoTool to Calculate** when a patient is transitioning from home or other subcutaneous protocol.*

When selecting **From IV:** Complete the fields for Current insulin infusion rate and Last BG then Confirm:

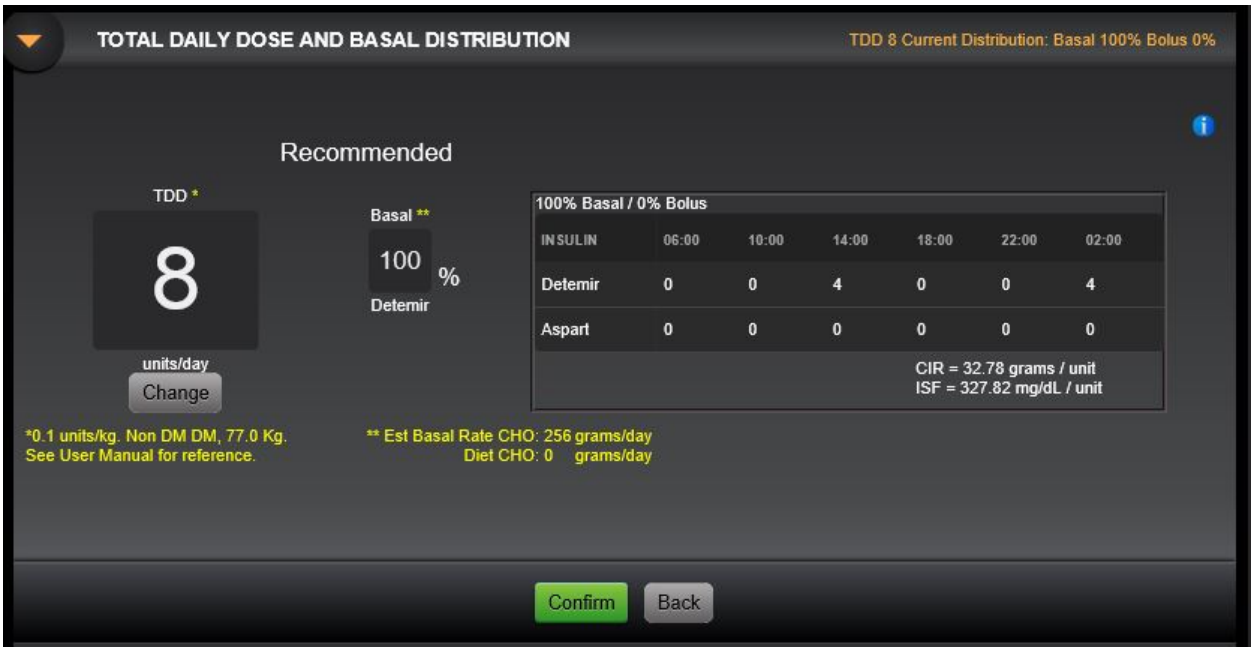


When selecting From SubQ: Complete the fields for Basal and Bolus dosing and Confirm:

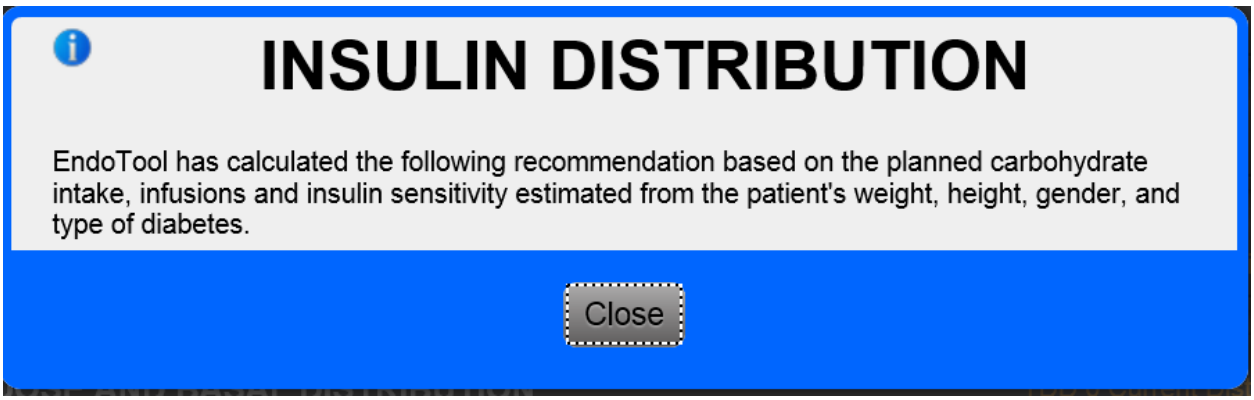


8 Total Daily Dose (TDD) and Basal/Bolus %Distribution

The Total Daily Dose (TDD) and Basal/Bolus %Distribution screen allows the user, at the physician's direction, to accept or override the patient's initial dosing model.

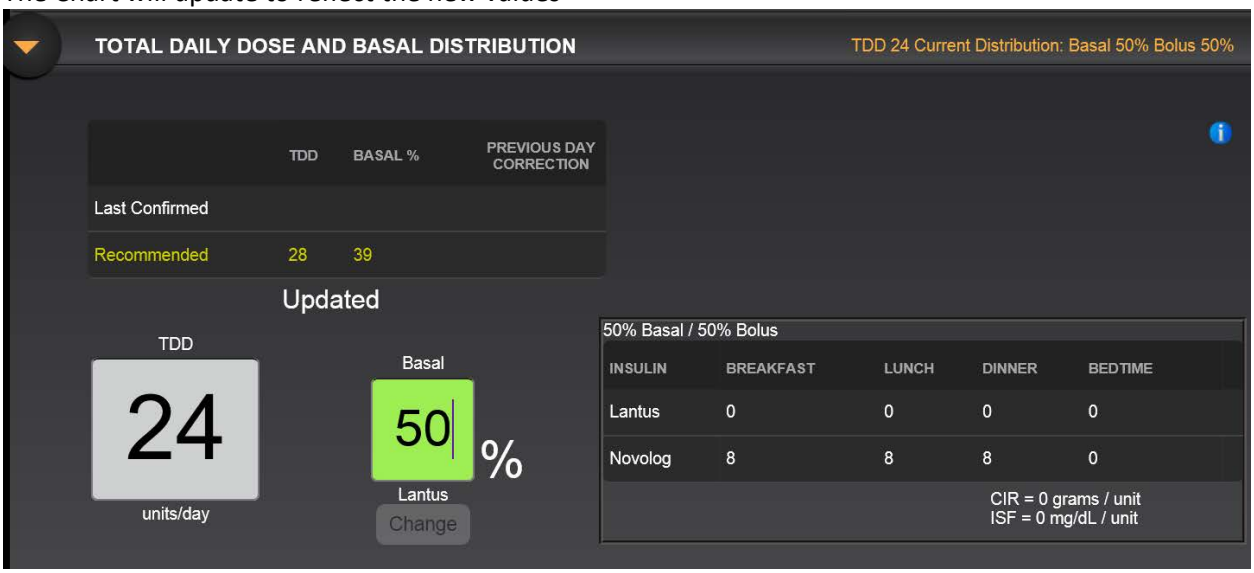


Additional information on the factors used to calculate the TDD are found in the Information section



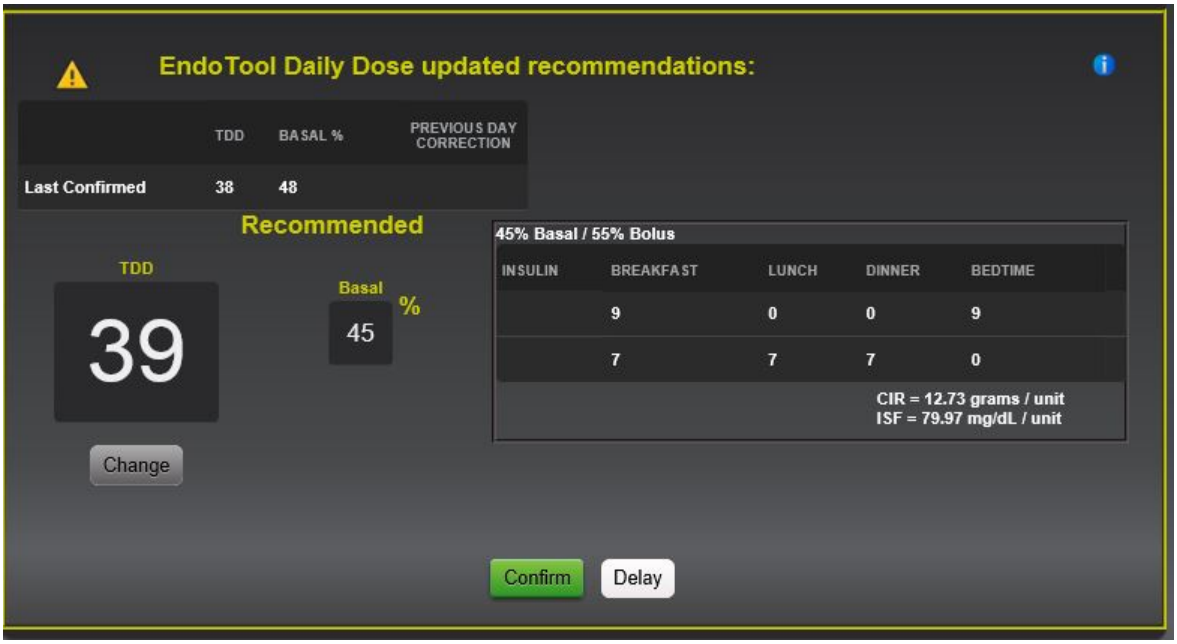
8.1 Changing the TDD and Distribution:

The Physician may select to Change the recommended TDD and Distribution at any time. Select the Change Button and then enter the new values for TDD and %Basal distribution The Chart will update to reflect the new values

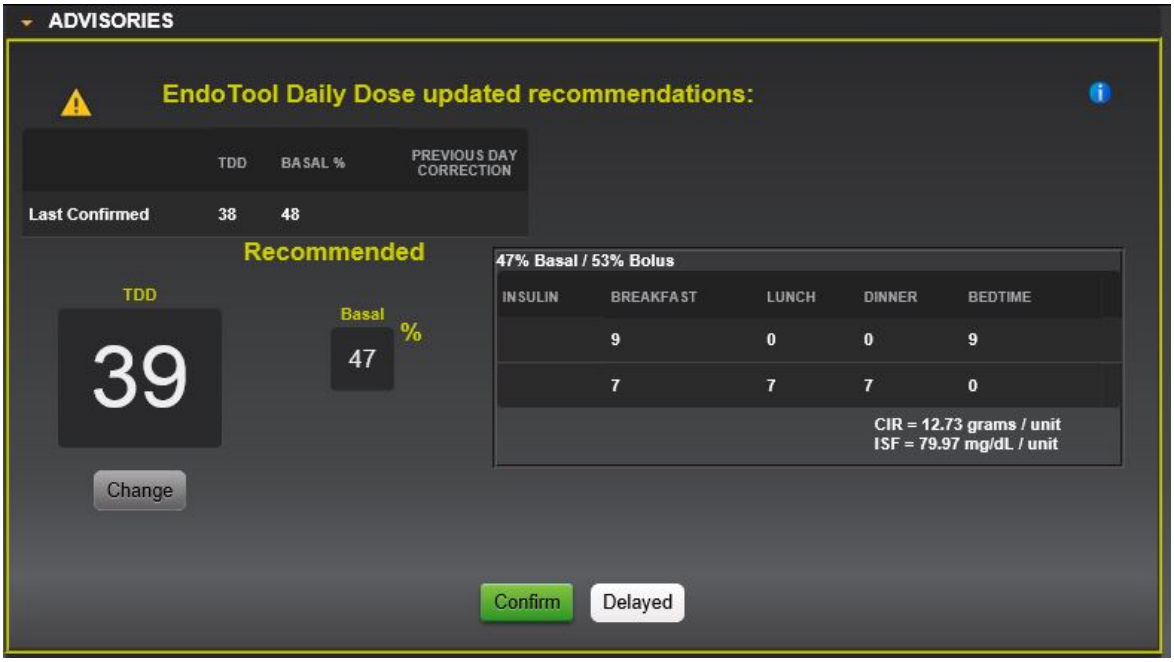


8.2 Daily Update to the TDD:

After the first blood glucose of the day is entered (typically the fasting BG entry) the TDD advisory screen will appear. This shows the updated model based on the patients individual response in the past 24 hours. The Clinician must confirm the updated TDD each day. An option exist to **Delay** the acceptance of the new values if the ordering doctor cannot confirm. In this case, the previous days TDD and Distribution will be used to continue treating the patient until confirmed or updated.



IF Delay is selected, each subsequent BG entry will return the user to the TDD Update advisory and prompt the user to Confirm or Change the TDD and distribution. After Confirm is selected this advisory will only appear at the scheduled time for daily TDD updates.



9 Blood Glucose/Meal Entry

At the specified time, or when clinically necessary, complete the required fields to enter the current Blood Glucose Reading. The time of the Sample should accurately reflect the actual sample time , but cannot be prior to 30 minutes from the current time. After valid entries are made, the Calculate button will become enabled, select Calculate to display the dosing recommendations.

9.1 Blood Glucose Fields

Field	Description
Glucose	Enter current point of care glucose in mg/dL.
Sample Time	Defaults to current time. If the point of care reading was performed greater than 5 minutes prior to the displayed time, adjust the sample time accordingly, and if necessary sample date
Sample Date	Defaults to current date.
Refused	Select this when a patient Refused the BG Check. Your Medical director can set the maximum number consecutive times a patient may refuse the BG check. After 24 hours of refusals, the patient should be discontinued on EndoTool.

9.2 Glucose Entry Advisories

Advisory screens will display for BG or Carbohydrate (Meal) entries that are outisde of set thresholds

9.3 Meal Entry

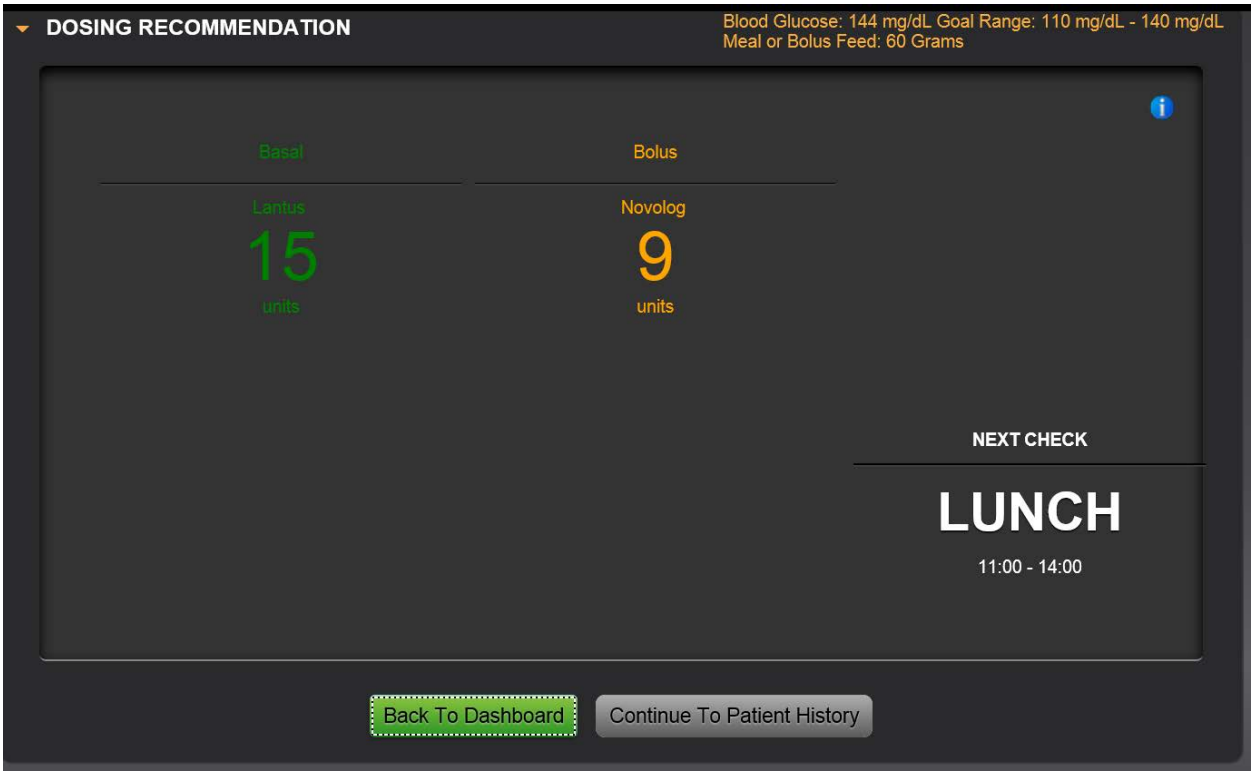
Meal entry is the entry of the carbohydrate content of the meal. There are three methods of accounting for carbohydrate content are provided; grams of carbs, carb servings or % of meal. It is recommended that a facility promote the use of only one method. A list of diets and feeding products with their associated carbohydrate content will be maintained in the medical directors table. When a specified diet is selected, that diet is associated with the medical director values. For example, if 60 grams of carbohydrate is set per meal then the application associates 100% of a meal with 60 grams of carbohydrate or 4 carb servings.

9.4 Meal Entry Fields

Field	Description
Food	Provide carbohydrate meal value
Grams/Carb Servings/%meal	Indicates if Food value entered is in grams of carbs, carb servings or % of the meal. *A predetermined meal value is set in the medical director parameters. Example: if meals are a set value of 60 grams then 100% of a meal is 60 grams or 4 Carb Servings*
Bolus Tube Feed	Provide the volume in mL of the bolus tube feed *A list of tube feeding products and their carbohydrate content is provided in the medical director table. The system calculates the carbohydrate content based product type and the mLs of feeding entered.*
Patient has started eating the Meal…	IF the patient has already started consuming the meal, check this box to indicate that the patient is already eating, as this will be used in determining the model accuracy vs. a fasting BG entry.

10 Dose Recommendations

The Dosing Instructions screen displays multiple types of dosing recommendations, these may vary according to Medical Director, Facility or Unit. Each recommendation will have a specific location and associated color.



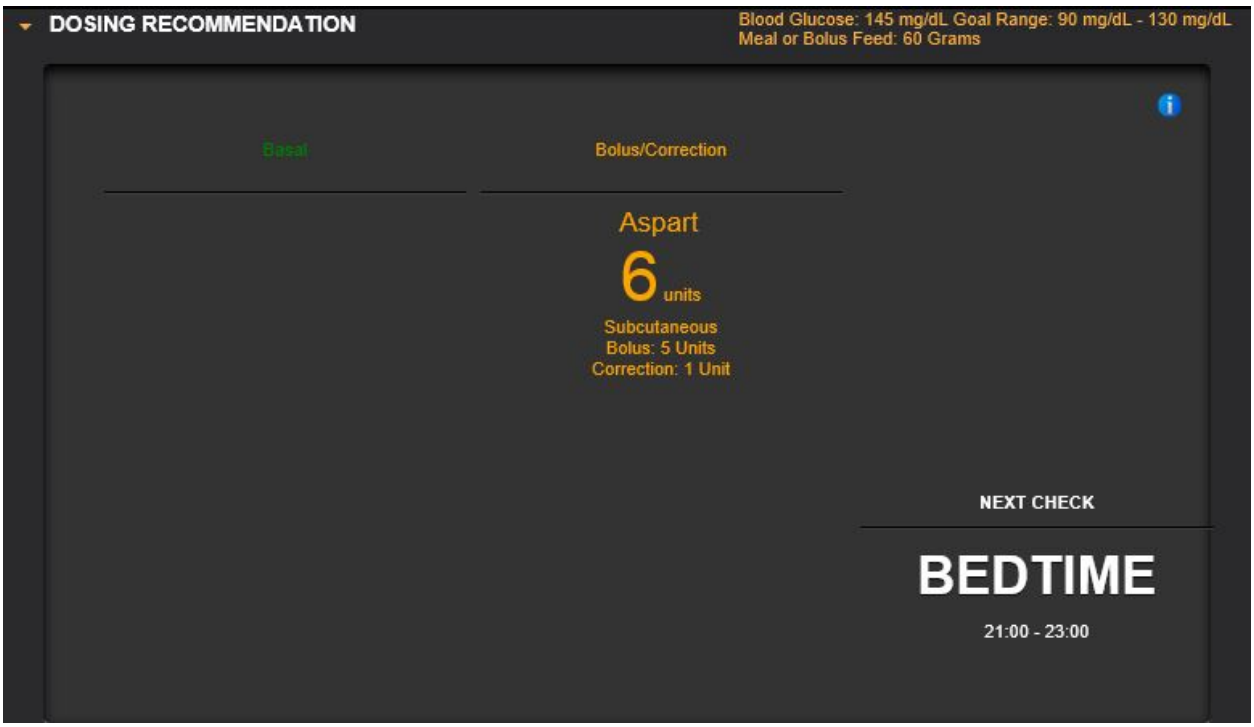
10.1 Basal Insulin

Basal Insulin dose recommendations are displayed in the upper left quadrant in green font.

10.2 Bolus/Correction Insulin

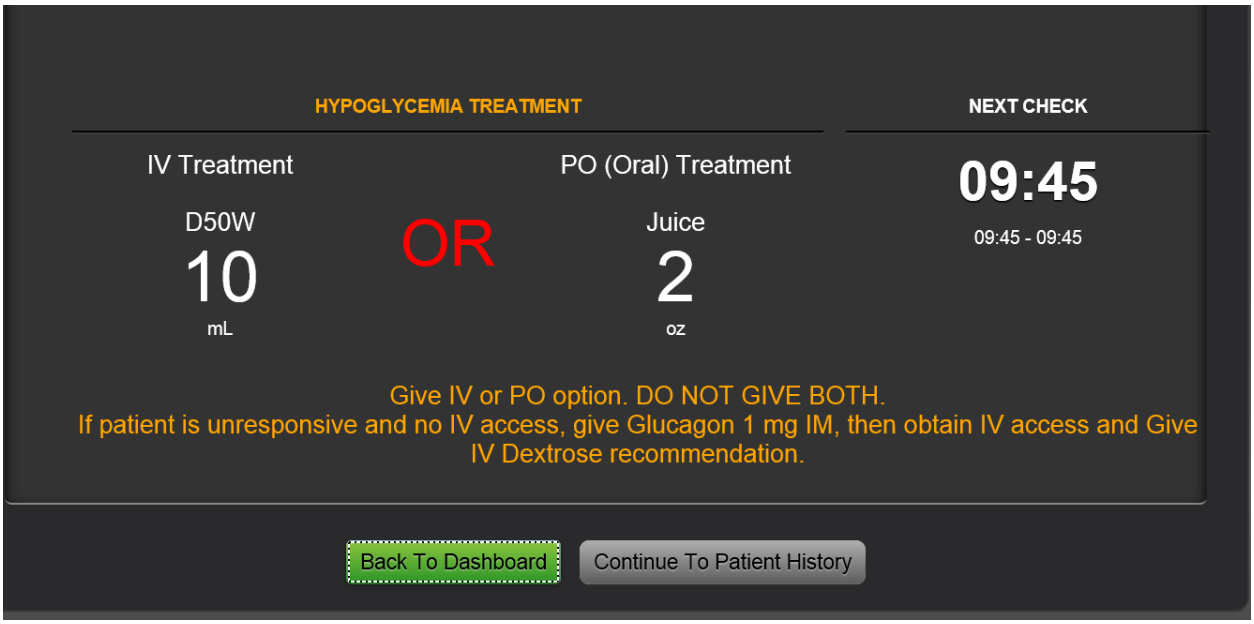
Bolus Insulin dose recommendations are displayed in the upper middle quadrant in Orange font.

IF Correction insulin is recommended, it is added to the Bolus amount and indicated by showing a breakdown below the recommended dose as shown here:



10.3 Hypoglycemia Treatment

Hypoglycemia treatment recommendations are provided in 3 separate formats. IV recommendations for patients who are unable to consume oral carbohydrates, oral recommendations and glucagon for those patient's requiring IV treatment but cannot be provided IV access in a timely manner. The medical director will determine the IV and Oral agents recommended. Both IV and Oral recommendations are displayed Select only **one** method of treatment to be provided. At Confirmation the user will be able to indicate which agent was given.



10.4 Recovery Carbohydrate Treatment

Recovery Carbohydrate treatment recommendations are provided in 2 separate formats. IV infusion recommendations for patients who are unable to consume oral carbohydrates and oral recommendations for those patients who are eating. The medical director will determine the IV and Oral agents recommended. Both IV and Oral recommendations are displayed. Select only **one** method of treatment to be provided. At Confirmation the user will be able to indicate which agent was given.

10.5 Dosing Instruction Fields

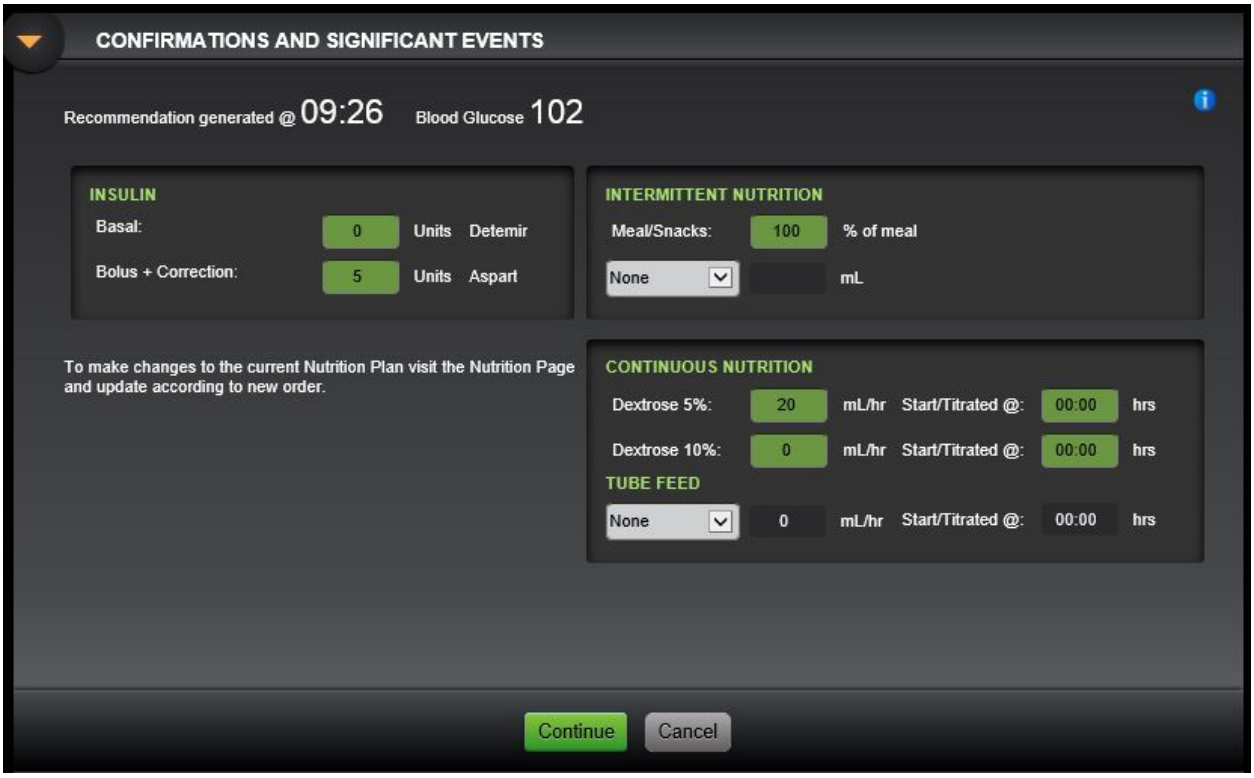
Field Name	Description
Basal	Long Acting (basal) insulin recommendations as schedule by the treating physicians orders
Bolus	Short acting (meal/carbohydrate) coverage for carbohydrate intake
Correction	Short acting (corrective) insulin recommended for glucose level above an expected value.

Field Name	Description
Hypoglycemia Treatment	Calculated recommendation of carbohydrate to increase a glucose level lower the medical director setting for hypoglycemic treatment.
IV Dextrose:	D 10/25/50 as indicated for age and weight
or	
Oral Agent	Agent selected by medical director appropriate for age and weight
or	
Glucagon	Dose as indicated for weight and medical director setting
Recovery Carbohydrate Treatment	Calculated recommendation of carbohydrate to counter balance the amount of insulin on board.
IV Detrose	D 5 or 10 as indicated for age and weight
or	
Oral Agent	Oral glucose agent as set by Medical Director
Next Check	Displays specific time or meal interval at which next glucose check should occur. Not all glucose check times will conform to the schedule selected. Glucose checks will be determined by the patient's response and current recommendations. Frequency can be as little as 15 min and no longer than the schedule selected at setup.

11 Confirmations

With the exception of the first glucose and/or meal entry the Confirmations screen will be the first screen encountered when a patient entry occurs.

The Confirmations allow the user to provide the system with two types of information. First, the user updates the system as to whether or not the patient received the recommended doses of insulin and or carbohydrate. If not, the user changes the values to what was given. Second, the user updates any Continuous Nutrition rate such as dextrose containing IV fluids, Tube feeding or TPN. If changes to Tube Feeding type or TPN content has occurred the user must return to the Patient Information screen and update those fields.



Recommendations for insulin, recovery carbs, hypoglycemia treatment and previously entered nutritional carbs are prepopulated. The user will review all fields. If the values displayed are correct the user selects the checkbox. If the dose(s) delivered differ from displayed values the user will change the values to what was given. In addition, the user will update the IV fluid and Continuous Nutrition fields if any changes have occurred since the last entry. The checkbox is selected attesting to the accuracy of the values displayed and the user can select either the Save and Exit option to return to the Dashboard or select the Continue option to advance to the Glucose/Meal Entry screen.

11.1 Confirmation Fields

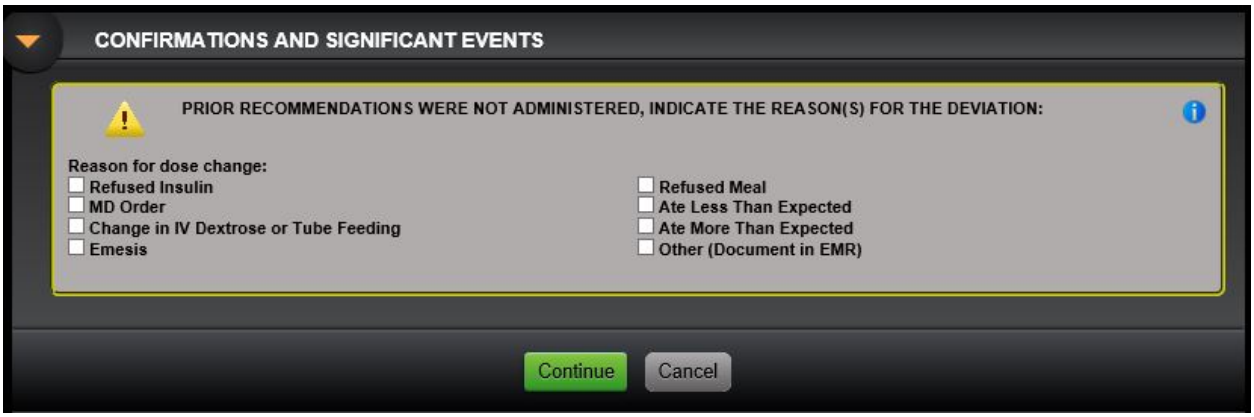
Field	Description
Insulin	**If recommended at last glucose/meal entry:**
Basal	Populates recommend dose of basal insulin
Bolus/Correction	Populates combined dose of bolus/correction insulin
Bolus	Populates recommend dose of bolus insulin
Correction	Populates recommended dose of correction insulin
Hypoglycemia Treatment	Populates recommended dose of:
Dextrose	D50/D25/D10 as per age and medical director
Oral Agent	Oral glucose (juice/tabs/get etc.) as per medical director
Glucagon	Weight based dose recommendation as per medical director

Meals	Populates amount entered at last entry:
Food	grams, carb servings or percentage of meal
Bolus Tube Feeding	mL of bolus tube feeding
Continuous Nutrition	Populates rate of infusion for:
D5	All 5% dextrose infusions
D10	All 10% dextrose infusions
Tube Feeding	Tube feeding product
TPN	Total parenteral nutrition

12 Dose Deviations

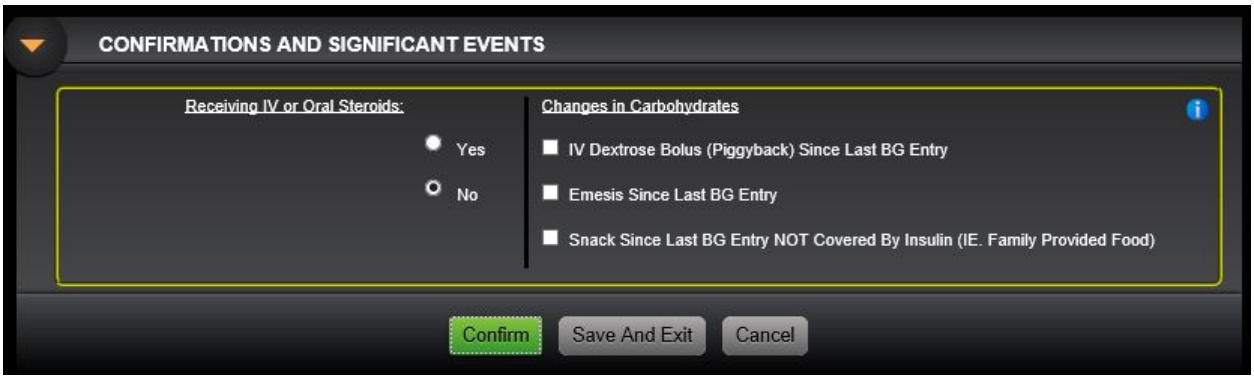
12.1 Dose Deviation Reasons

The Dose Deviation Reasons screen will appear when any recommended dose value was changed on the confirmation screen. Check all reasons that apply.



13 Significant Events

Certain events are known to impact insulin needs. Two of those events are changes in steroid dosing and the administration of antibiotics in dextrose containing solutions. If one or both of these events have occurred since the last interaction with the system, the user can select the correct radio button, check the box or both.



14 History

Glucose entry and dosing information for a patient is displayed in the History screen and can be reviewed at any time. Entries that have been deleted will be displayed with a strike through.

Only the last 72 hours of history will be displayed in the History screen. To view the entire history, go to the Patient Reports section.

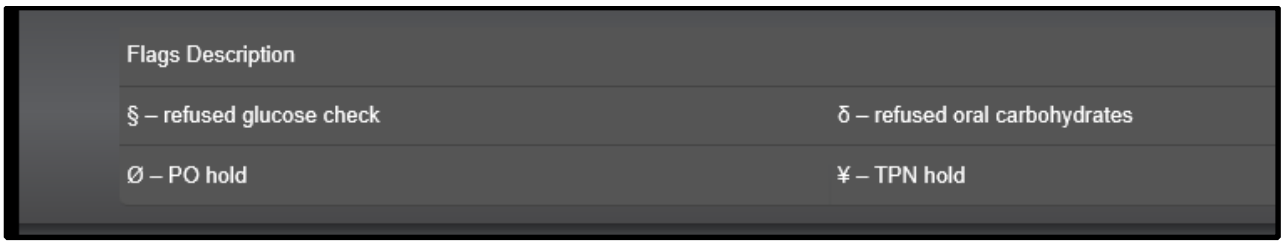
Selecting the Grid ICON  opens thed HIstory Grid .

14.1 History Grid Fields

Field Name	Description
Time	Calculation time of the glucose entry Hover the mouse over any Calculation time to display the Sample time for the glucose entry
Date	The associated date is displayed at the top of the time column. *Today and Yesterday are labeled as such. Day/Month/Year on the days prior to today and yesterday.*
Flags	Flags associated with glucose entry (see below)
Glucose	Blood Glucose entered

Field Name	Description
Basal (Insulin Name)	Displays basal insulin dose
BOLUS (Insulin Name)	Displays meal insulin dose
Correct-Correction(Insulin Name)	Displays Correction insulin dose
Oral Carbs	Displays oral carbohydrates for meal intake, tube feeding, hypoglycemia treatment and recovery carbohydrate treatment. Doses specific to hypoglycemia or recovery carbohydrate dosing are labeled.
DEXTROSE	Displays dextrose doses for IV dextrose infusion, TPN, and D50/25/10. Doses specific to hypoglycemia or recovery carbohydrate dosing are labeled.
FREQ	Frequency of next BG check in minutes, hours, or meal time.
CLINICIAN	User logged in at time of entry
UNIT	Indicates the Unit in which the BG was entered.
Confirmed row	Indicates the values confirmed by the user.
Change in Insulin	If at any time a change in the insulin ordered occurs a sub-header will display with the previous insulin and the new insulin displayed.
Time	Calculation time of the glucose entry Hover the mouse over any Calculation time to display the Sample time for the glucose entry
Date	The associated date is displayed at the top of the time column. *Today and Yesterday are labeled as such. Day/Month/Year on the days prior to today and yesterday.*

14.2 History Grid Flags



14.3 Flags Key

	Refused glucose check
	PO hold
	TPN hold
	Refused oral carbohydrates

14.4 History Graph View

Selecting this icon  will show a graphical display of certain elements of the History Grid.

BG Trend (sample), CHO Trend or Insulin Dosing Trend

14.5 History Graph Fields

Field Name	Description
Vertical axis- Glucose/Insulin/Carbohydrate	Blood glucose ranges
Horizontal axis- Time	Date and Time in two hour intervals
	Changes the view from the combined graphics to the individual graphs
<< OR >>	Shifts graph backward or forward in time
Green Highlight	Indicates the BG Goal Range
Yellow	Blood Glucose
Light Blue	Insulin
Red	Carbohydrates

15 Advisories

Advisories are provided to help the user avoid errors and to aid in decision support. Endotool will show recommendations for resolution of specific situations. Some advisories may provide directions, such as, contact physician or alternate therapies. . These messages are approved by the Medical Director and are configurable for the facility and. Review the information provided in the Advisory, then select *Confirm* to acknowledge and advance to the next screen. Advisories are intended to ensure that the clinician is making an informed decision.

15.1 Patient Total Daily Dose Advisory

When the systems internal math model determines that the dose recommendations should increase, an advisory is displayed. This is intended to keep the user informed of increases in Insulin doses and require acknowledgement by the user by selecting “Confirm”

The user, at their own discretion or at the direction of the physician, can elect to ***Confirm***, ***Delay*** or ***Change*** the increase in dose recommendations by the application.

16 Deleting a Glucose Entry

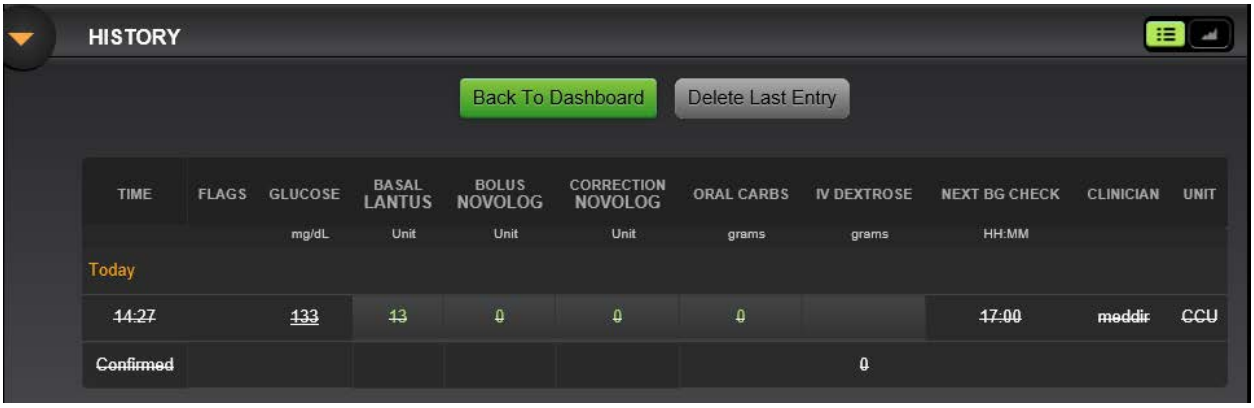
In the event that an incorrect information was entered on a patient, the last blood glucose entry can be deleted from the record (if allowed by the Unit Administrator).

If the patient has NOT been given the recommended insulin Dose, the user may delete the previous BG reading and enter the current(corrected) blood glucose value.

If the patient has been given insulin based on the recommendations using an incorrect blood glucose value do not delete the entry. Check the patient's blood glucose immediately and , enter the current blood glucose value to obtain new recommendations. Contact the patient's physician when applicable to your policy, as additional glucose checks may be indicated.

Follow all facility polices regarding medication errors. EndoTool is not designed as a medication tracking system.

To delete an entry select Delete Last Entry from the History screen then, confirm deletion on the deletion screen. A deleted entry will display on the History with a strike through.



17 Transferring a Patient

There are 2 methods for patient transfer

- **Unit receiving patient** – Search and add the patient using SEARCH AND ADD PATIENTS. Enter the patient's new room number into the Patient Information screen and Confirm patient transfer.
- **Unit transferring patient** – Select the unit from the Dashboard to which the patient is being transferred. Search and add the patient using SEARCH AND ADD PATIENTS. Enter the patient's new room number into the Patient Information screen and Confirm patient transfer.

18 Discontinue a Patient on Endotool

To discontinue treatment of a patient on Endotool, access the Patient Information screen and select the "Discontinue" button. You will be prompted to confirm your selection to discontinue. Select Yes to discontinue, else Select No if you have inadvertently selected this option.

19 Reactivating a Patient

Search and add the patient using Search and Add Patient

Enter all necessary information. Complete Start/Restart Dosing screen and Confirm. These steps are the same as the initial activation of a patient.

20 Patient Reports

The number and type of available reports / orders is unit specific. A barcode can be placed on the bottom right hand corner of report. This barcode can be the patient's Primary Identifier or a form number. The length of the barcode is limited to 20 characters

To view and print a report:

- Select the patient from the Dashboard
- Select Patient Reports
- Select the report of interest
- Complete applicable fields.
- Select Run Report to display a printable report
- Select the print icon or right click on the displayed report and select the print option

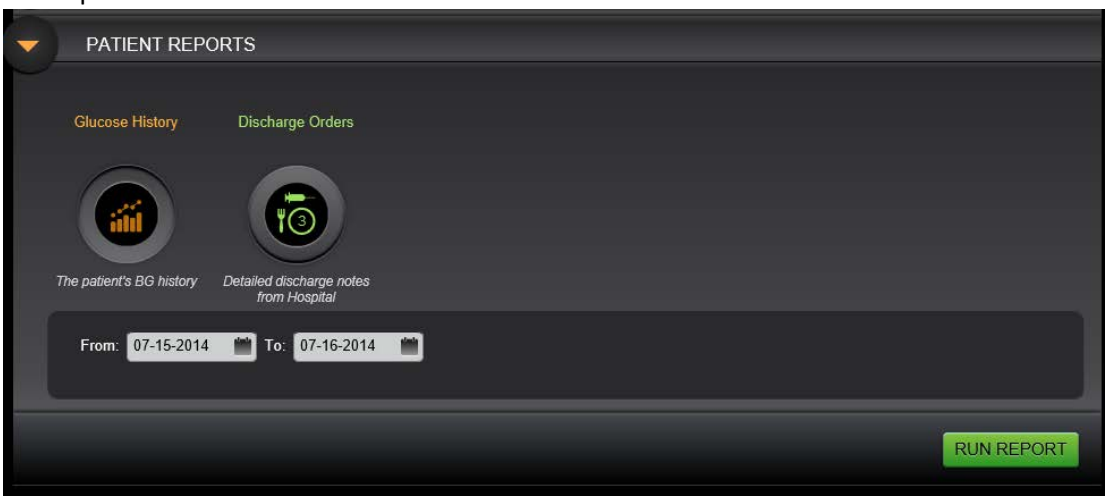
20.1 Report- Glucose Record

Select the report and then desired date range. To include the graph select Include Graphics checkbox. This will print the entire Blood Glucose Record showing all confirmed doses and administered carbohydrates. When indicated, the flags for significant events will appear on the Glucose Record.

20.2 Report-Discharge Recommendations

Selecting the Discharge recommendations will show the currently calculated TDD with Basal and Bolus distribution. This can be used to maintain the patient euglycemia when their diet is tightly monitored

and reported.



21 Software Support and Troubleshooting

For technical issues while running EndoTool SubQ (passwords, network connectivity, hardware, etc.), please contact your facility's IT department.

For clinical and application issues regarding the application, assistance is available 24 hours a day/7 days a week. Call 1-877-FIX GLUC (1-877-349-4582) to reach Monarch Medical Technologies Support Personnel.

Cannot Find Patient

Symptom: Unable to locate patient when searching

Cause: Incorrect patient identifying number is entered or ADT feed is experiencing a downtime.

Resolution: Verify the use of the correct identifying number. Error can occur by searching without using leading zeroes, etc. Alternative searches include but are not limited to patient last name, patient first name, etc. Contact your IT department concerning ADT feed downtime.

Audible Alert not working

Symptom: Client cannot hear Alerts

Cause: Disabled sound in windows or speaker volume is muted.

Resolution: Verify audible alert icon is set to on, workstation is not muted, and adjust external speaker volume as necessary. If this does not resolve the problem contact your IT department.

Unable to Print Reports

Symptom: Unable to print

Cause: Printer definition on the PC is not correct.

Resolution: Contact your IT department to configure the printer in the operating system on the PC.