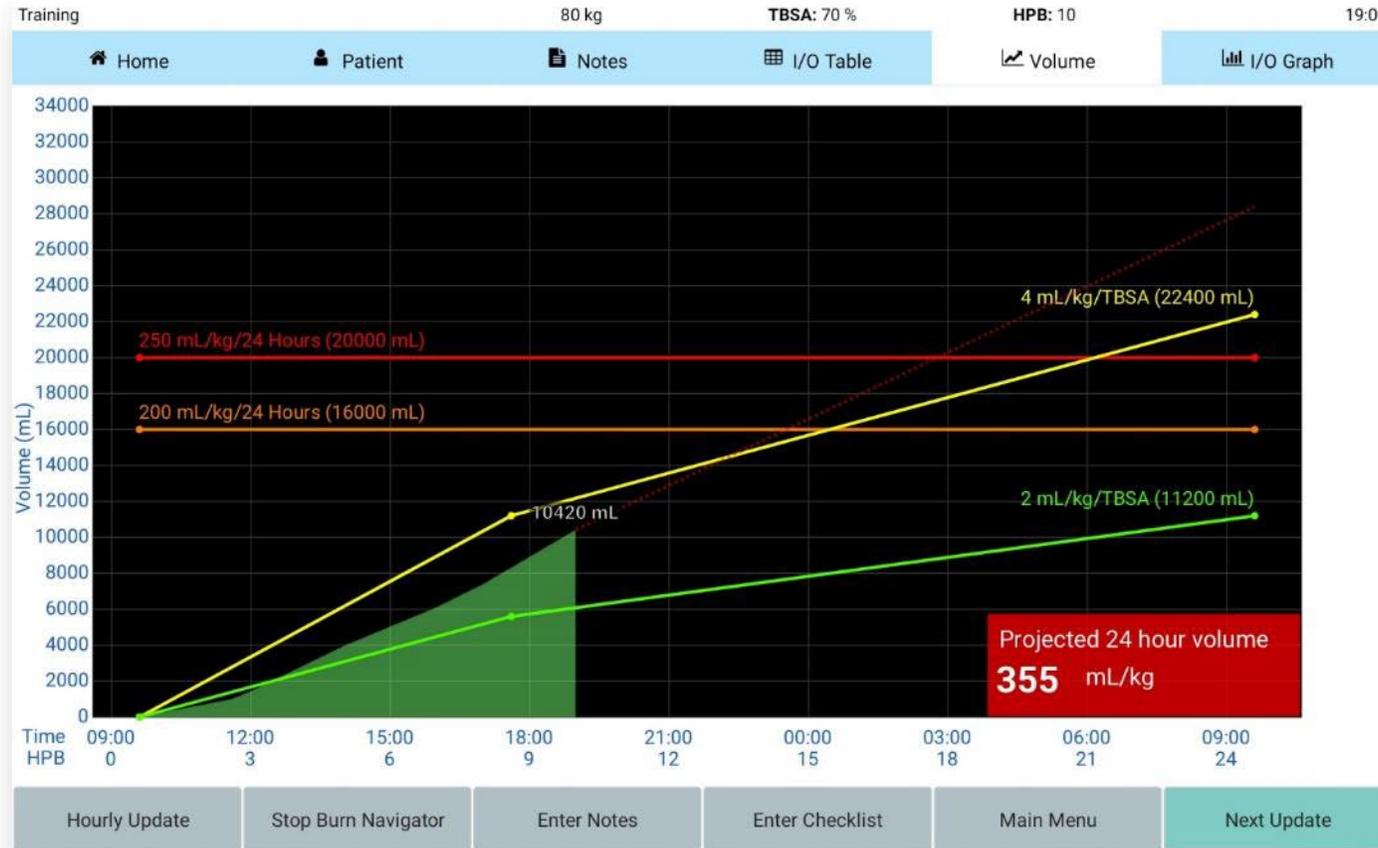


## Burn Navigator® Active Detailed Walkthrough – Adult Example



# Welcome!

Please review the  
**Burn Navigator Educational Background** slides  
for important clinical context before diving into  
these slides!

<https://arcosmedical.com/burn-navigator/training-and-resources/>

# Clinical Goal of Burn Resuscitation

Adequate tissue perfusion at the least physiological cost of fluids

## Burn Navigator

- Helps implement a defined protocol for burn fluid resuscitation
- Supports team communication with resuscitation graphs

# Customization Features

- Burn Navigator has **many** customization options (much more than shown at right)
- This walk-through will show one protocol example
- Please contact us for additional customization details  
[info@arcosmedical.com](mailto:info@arcosmedical.com)

## Select the Patient Protocol

**Adult predictive algorithm**

Uses Salinas algorithm developed by U.S. Army Burn Center ?

Targets 30-50 mL/hr urine output

Up to 15% changes each hour

Recommended for most adults without gross myoglobinuria.

**Custom protocol**

Target:  to  mL  urine output  
 to  mL/kg

Recommended for pediatric patients.

Limited to 10% changes each hour

**Monitor only**

No hourly recommendations.

Provides resuscitation graphs and alerts.

# Indications for Use

- The Burn Navigator is indicated for use in the care of adult patients with 20% or more Total Body Surface Area (TBSA) burned, or pediatric patients, 24 months old or older, weighing at least 10 kg with 15% or more TBSA burned, as a fluid resuscitation monitor and calculator for hourly fluid recommendations.
- The Burn Navigator is intended to be used for burn patients of all ages, weights and co-morbidities as a fluid resuscitation monitor.
- The Burn Navigator is intended to be initiated within 24 hours of the burn incident and to be used no longer than 72 hours post burn.

# Clinical Decision Support (CDS)

- As a CDS tool, Burn Navigator is not intended to replace clinical decision judgement, rather it informs clinical decision making.
- Users should always rely on their clinical judgment when making decision regarding patient care. The Burn Navigator recommendations are not a substitute for clinical judgment.

# Protocols: 3 Common Options

## Provider Chooses Protocol

Select the Patient Protocol

**Adult predictive algorithm**

Uses Salinas algorithm developed by U.S. Army Burn Center ?

Targets 30-50 mL/hr urine output

Up to 15% changes each hour

Recommended for most adults without gross myoglobinuria.

**Custom protocol**

Target:  to  mL  urine output  
 to  mL/kg

Recommended for pediatric patients.

Limited to 10% changes each hour

**Monitor only**

No hourly recommendations.

Provides resuscitation graphs and alerts.

# 1. Adult Predictive Protocol

## ⦿ Adult predictive algorithm

Uses Salinas algorithm developed by U.S. Army Burn Center ?

Targets 30-50 mL/hr urine output

Up to 20% changes each hour

Recommended for most adults without gross myoglobinuria.

- Uses the **Salinas algorithm** developed by U.S. Army Burn Center<sup>1</sup>.
- The Salinas algorithm uses the trend of the last three hours of UO to recommend the next hour's IV infusion rate.
- The Salinas algorithm will go up to the hourly cap chosen by your medical director (e.g., 10%, 15% or 20% each hour).
- This protocol is recommend for most adult patients who do not have resuscitation confounders.

<sup>1</sup> Salinas, J et al, Computerized decision support system improves fluid resuscitation following severe burns: An original study, Crit Care Med 2011, 39(9), 2031-8.

# Adult Protocol uses a 3-hour trending algorithm



## 2. Custom Protocol

Custom protocol

Target:  to  mL  urine output  
 to  mL/kg

Recommended for pediatric patients.  
Limited to 10% changes each hour

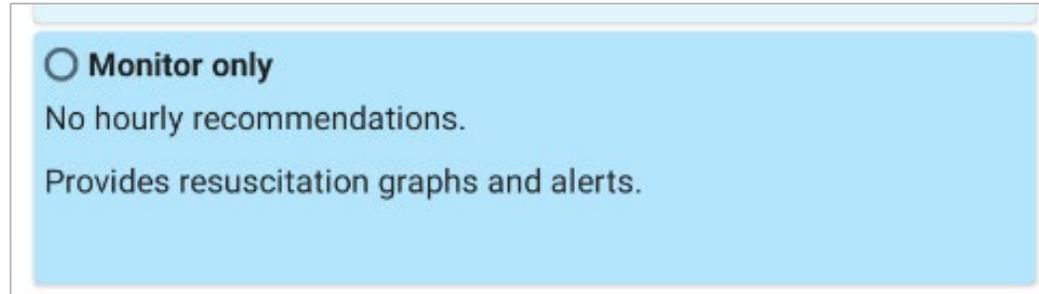
Custom protocol

Target:  to  mL/kg  urine output  
 to  mL/hr

Recommended for pediatric patients.  
Limited to 10% changes each hour

- Allows clinicians to set a target Urine Output range in **mL** or **mL/kg** each hour.
- If the patient's UO is not in target, then the Custom Protocol will recommend increasing or decreasing the IV fluid rate by 10%. The custom protocol is limited to 10% changes in each hour.

# 3. Monitor Only



- Monitor Only provides resuscitation graphs, alerts and the 24 hour fluid projections.
- Monitor Only does not provide an hourly IV fluid recommendation based on UO
- Choose this protocol when UO is not a good surrogate of general organ perfusion (such as acute renal failure or with diuretics) or if the patient does not have a Foley catheter
- **Choose this protocol if patient is < 10 kg, < 24 months old, < 15% TBSA or does not have a Foley**

# Interface

80 kg      TBSA: 70 %      HPB: 2

Patient Recommendation

Select primary fluid:

Select initial rate formula:

Recommended rate:

Enter new rate:  mL/hr

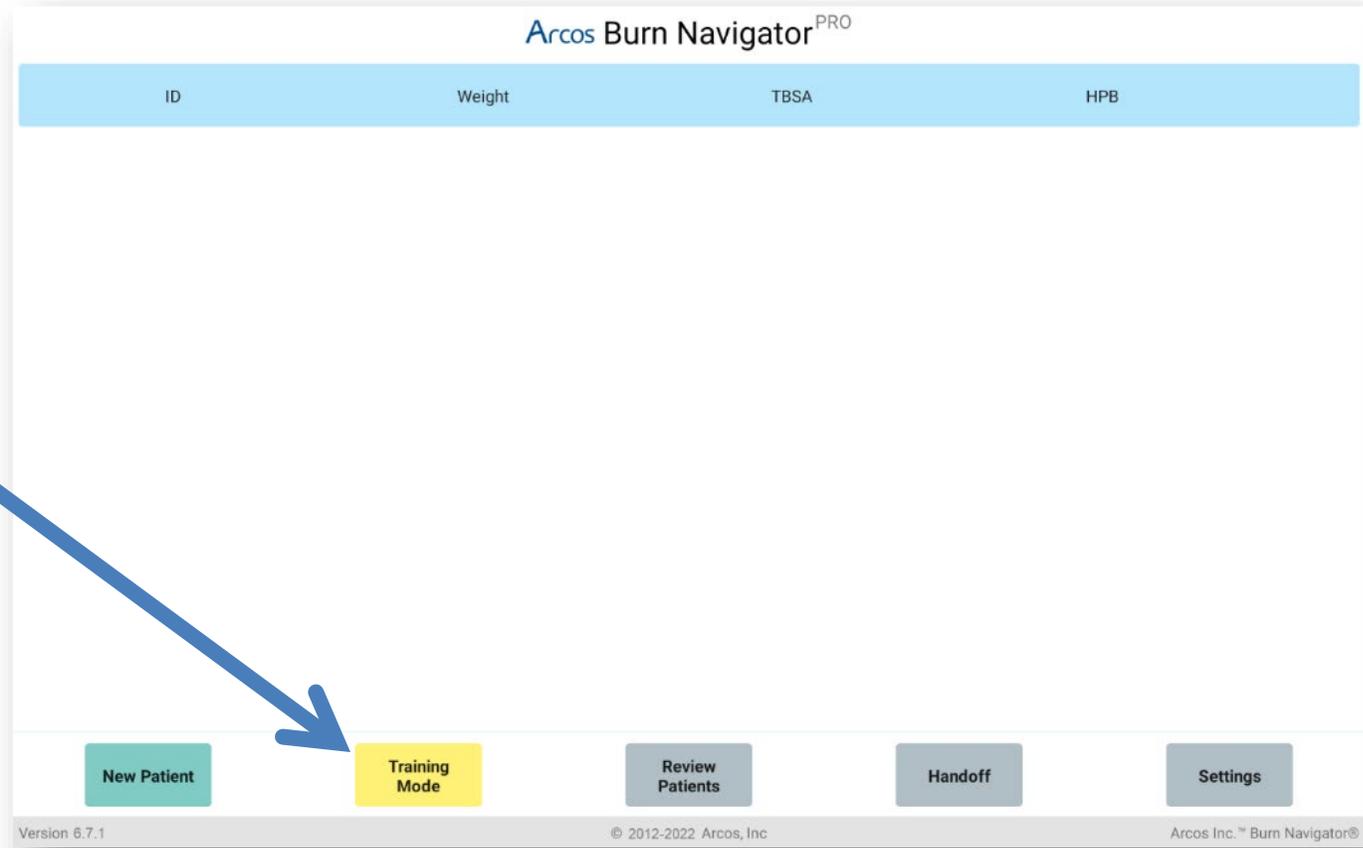
**Blue fields you cannot edit**



**White fields you can edit**



**Press  
“Training Mode”**



**Enter weight**  
- You can enter **kg** or **lbs**.

80 kg                      TBSA: -- %                      HPB: --

New Patient Information

Enter Cite ID

Enter patient weight

or

**Then, press "Next"**

## Confounders

Does the patient have...

**Myoglobinuria?**

Yes

No

Unknown

**Hyperglycemia?**

Yes

No

Unknown

**High blood alcohol?**

Yes

No

Unknown

**End stage renal disease?**

Yes

No

Unknown

**Congestive heart failure?**

Yes

No

Unknown

Back

Next

# Choose Adult predictive algorithm

80 kg                      TBSA: -- %                      HPB: --

Select the Patient Protocol

**Adult predictive algorithm**

Uses Salinas algorithm developed by U.S. Army Burn Center ?

Targets 30-50 mL/hr urine output

Up to 15% changes each hour

Recommended for most adults without gross myoglobinuria.

**Custom protocol**

Target: 40 to 80 mL/hr urine output

          0.5 to 1 mL/kg

Recommended for pediatric patients.

Limited to 10% changes each hour

**Monitor only**

No hourly recommendations.

Provides resuscitation graphs and alerts.

# Enter TBSA

- Be as accurate as you can be
- Only count 2<sup>nd</sup> and 3<sup>rd</sup> degree

training-5500 80 kg TBSA: 70 % HPB: -- 13:56

Total Body Surface Area Burned (TBSA)  
Enter total body surface area burned

70| %

NOTE: Only include 2nd and 3rd degree burns for TBSA.

18+ years  
 15 - 17 years  
 10 - 14 years  
 5 - 9 years  
 1 - 4 years  
 Birth to 1 year

Back Next

1 2 3 4 5 6 7 8 9 0 ←

Clear Enter

# Enter height

(it is optional for adult predictive algorithm)

Training 80 kg      TBSA: 70 %      HPB: --      10:35

**Patient Height**  
Enter patient height (Optional for adult predictive algorithm)

**cm.**    or     **in.**

**Body Surface Area**  
-- m<sup>2</sup>

**TBSA:**      **Burn Surface Area**  
70 %      -- m<sup>2</sup>

1 2 3 4 5 6 7 8 9 0

**Enter how long ago the patient was burned in hours and minutes**

If you don't know, make your best guess



80 kg                      TBSA: 70 %                      HPB: 2

Elapsed Time Since Burn

Enter elapsed time since burn

0	43
1	
<b>2</b>	<b>00</b>
3	

hrs                      mins

Time of burn (clock time)

08:35

Back      Next

The software will calculate time of burn



**You can select different starting formulas** →

80 kg                      TBSA: 70 %                      HPB: 2

Patient Recommendation

Select primary fluid:

Select initial rate formula:

Recommended rate:

Enter new rate:  mL/hr

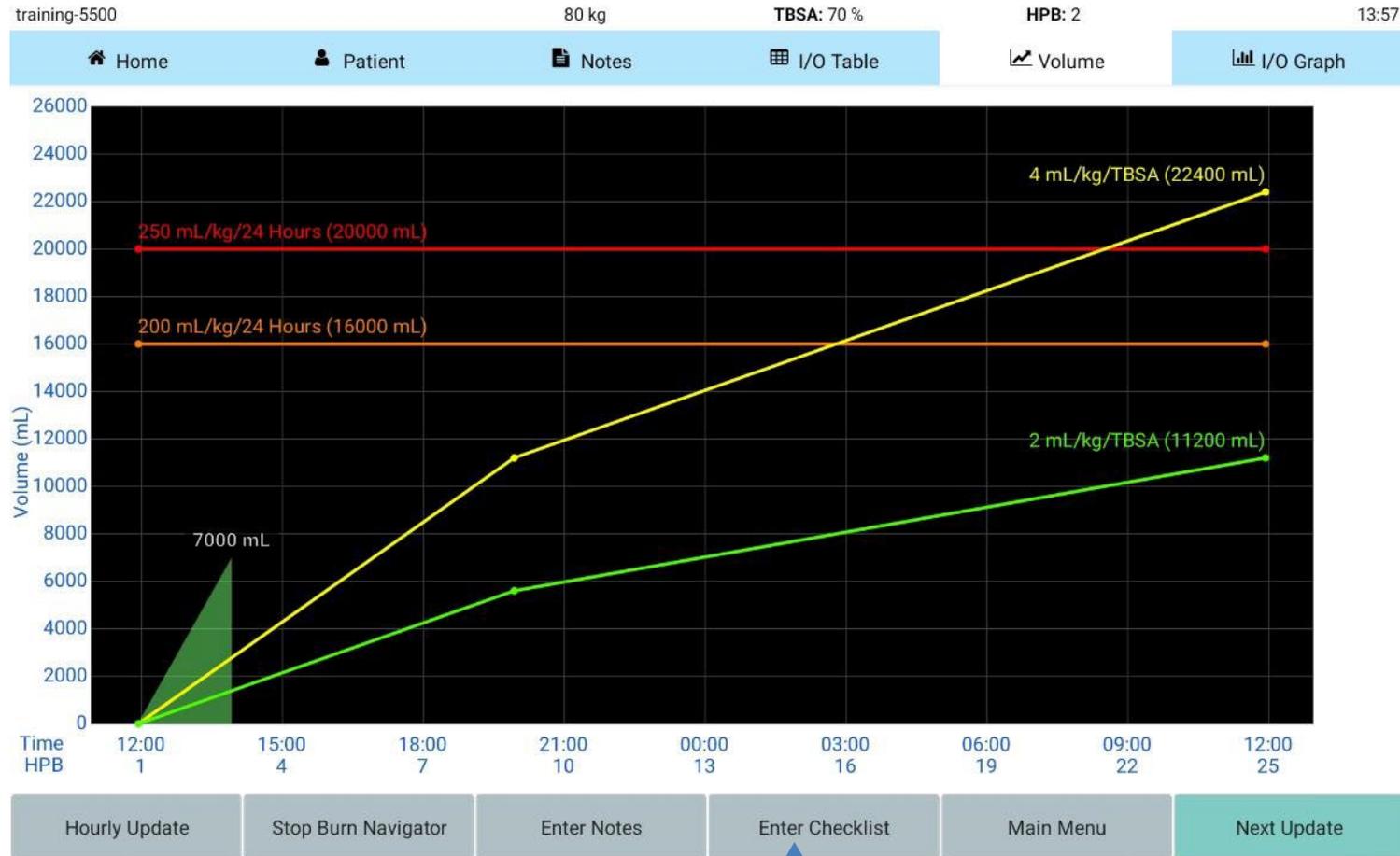
↑

Your physician may want you to start at a different rate. If so, enter the rate here.

Lactated Ringer's is the default fluid. You can change fluid types.

# You've completed the new patient setup!

## Now you see the Volume screen



Press "Enter Checklist"

# Enter checklist information

80 kg      TBSA: 70 %      HPB: 2

<b>Enter Vitals</b>	
✓ Systolic BP	85 mmHg
✓ Diastolic BP	58 mmHg
CVP	mmHg
✓ Heart Rate	70 bpm
<b>Enter Bladder Pressure</b>	
Bladder Pressure	mmHg
<b>Enter Labs</b>	
ScvO2	%
✓ Lactate	2.1 mg/dL
Base Excess	mEq/L
✓ Hemoglobin	10.5 g/dL

<b>Check Extremities</b>	
<input checked="" type="checkbox"/> Elevate burned extremities	
<input checked="" type="checkbox"/> Check for tightness	
✓ Left Upper	normal ▼
✓ Right Upper	weak ▼
✓ Left Lower	normal ▼
✓ Right Lower	weak ▼

Cancel    Enter

← Don't forget these!

← Drop-down selections

Checklists are recommended:

- When starting a new resuscitation
- Every 6 hours

# Advance time to the next update

training-7795      80 kg      TBSA: 65 %      HPB: 1      10:36

Home    Patient    Notes    I/O Table    Volume    I/O Graph

Current Primary Fluid: Lactated Ringer's      Next Update Due: 24 mins

Current Infusion Rate: 1050 mL/hr

**Current Protocol**

- Adult predictive algorithm  
UO target: 30 to 50 mL/hr
- Custom protocol  
UO target: 30 to 50 mL/hr
- Monitor only

Export CSV      Export Data File

Hourly Update    Stop Burn Navigator    Enter Notes    Enter Checklist    Main Menu    **Next Update**

Press "Next Update"



80 kg                      TBSA: 70 %                      HPB: 4

Fluid Update: Urine Data

Urine Measurement Time

From: 13:56      To: 15:00      64 mins

Urine output volume

3 mL                      0.0 mL/kg/hr

Urine output is not measured or unknown

Back      Next

“**From**” time is the end of the last update

“**To**” time is when you collect UO data

**Enter 3 mL UO, then press “Next”**

80 kg      TBSA: 70 %      HPB: 4

Fluids Given

From: 13:56      To: 15:00      64 mins

Primary fluid was: Lactated Ringer's ▼

Infusion rate: 1050 mL/hr

Infusion volume: 1050 mL

Average rate: 1050 mL/hr      Effective rate: 984 mL/hr



Average rate for this time period

Fluid Update: Urine Data

Urine Measurement Time

From: 13:56      To: 15:00      64 mins

Urine output volume

3 mL      0.0 mL/kg/hr

Urine output is not measured or unknown

Back      Next

You can edit the "To" time during fluid updates

During fluid updates, you can now enter the exact infused volume reported by the pump

Click “Select a fluid type”

Choose  
“Albumin 5%”

Enter 70mL  
and click  
“Repeat”

Weight: 80 kg      TBSA: 70 %      HPB: 3

Additional Fluids

Fluid	Volume	Repeat
Select a fluid type... ▼		

Total Additional Fluids: mL

80 kg      TBSA: 70 %      HPB: 3

Additional Fluids

Fluid	Volume	Repeat
x 5% Albumin	70 mL	<input checked="" type="checkbox"/>
Select a fluid type... ▼		

Total Additional Fluids: 70 mL

**WARNING:** Giving fluids in addition to the primary resuscitation fluid may require an adjustment to the fluid infusion rate by the user, different from the rate recommended by Burn Navigator. The attending physician should be contacted to determine the appropriate fluid infusion rate.

Back      Next

You'll see this warning message anytime additional fluids are given, because the algorithm doesn't take those fluids into account



80 kg      TBSA: 70 %      HPB: 3

Additional Fluids

Fluid	Volume	Repeat
<input type="checkbox"/> 5% Albumin	70 mL	<input checked="" type="checkbox"/>

Select a fluid type... ▼

Total Additional Fluids: 70 mL

**WARNING: Giving fluids in addition to the primary resuscitation fluid may require an adjustment to the fluid infusion rate by the user, different from the rate recommended by Burn Navigator. The attending physician should be contacted to determine the appropriate fluid infusion rate.**

Back      Next

New  
recommendation →

80 kg      TBSA: 70 %      HPB: 3

Patient Recommendation

Previous infusion rate: 1050 mL/hr

Select fluid type:

Recommended rate: 1260 mL/hr      Enter new rate:  mL/hr

↑ 20 %      ↑ 20 %

**Accept this recommendation  
by pressing "Enter"**

# Note that there are two Divisions of Additional Fluids: Adjunct Fluids & Other Fluids

Additional Fluid Type

**Adjunct Fluids Category**

- Lactated Ringer's
- Plasma-lyte
- Normal Saline
- Oral Resuscitation Fluids
- 5% Albumin
- 10% Albumin
- 20% Albumin
- 25% Albumin
- Whole Blood
- Plasma
- Pathogen Reduced Plasma
- Packed Red Blood Cells

**Other Fluids Category**

- LR + 5% Dextrose
- IV Medications
- Tube Feeds
- Other

Additional Fluids

Fluid	Volume	Repeat
<input checked="" type="checkbox"/> 5% Albumin	70 mL	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Other: <input type="text"/>	<input type="text"/> mL	<input type="checkbox"/>

Select a fluid type... ▼

Total Additional Fluids: 70 mL

**WARNING:** Giving fluids in addition to the primary resuscitation fluid may require an adjustment to the fluid infusion rate by the user, different from the rate recommended by Burn Navigator. The attending physician should be contacted to determine the appropriate fluid infusion rate.

↑

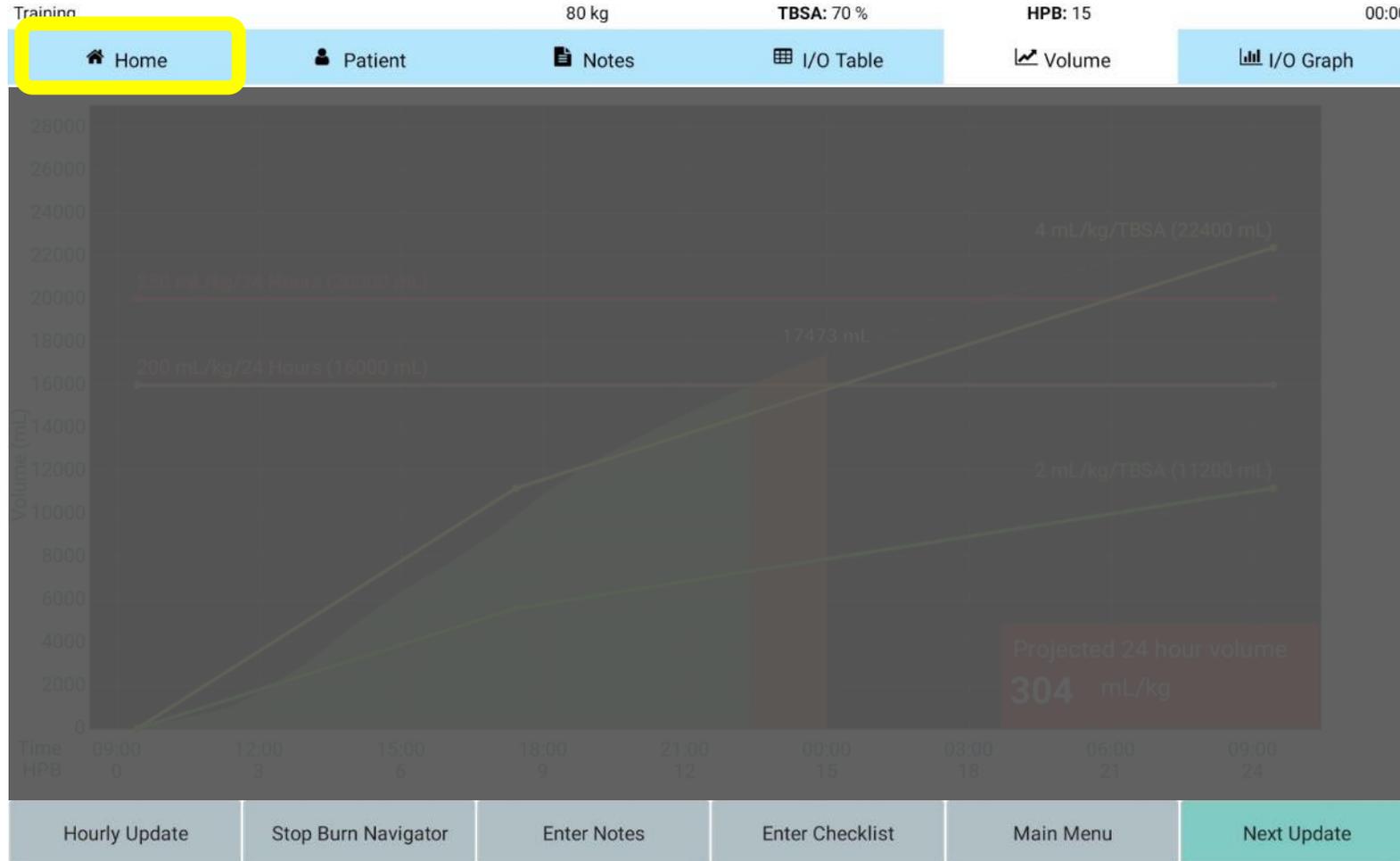
Additional Fluid are added to the total fluid volume and – if repeated – are included in the 24-hour fluid projection.

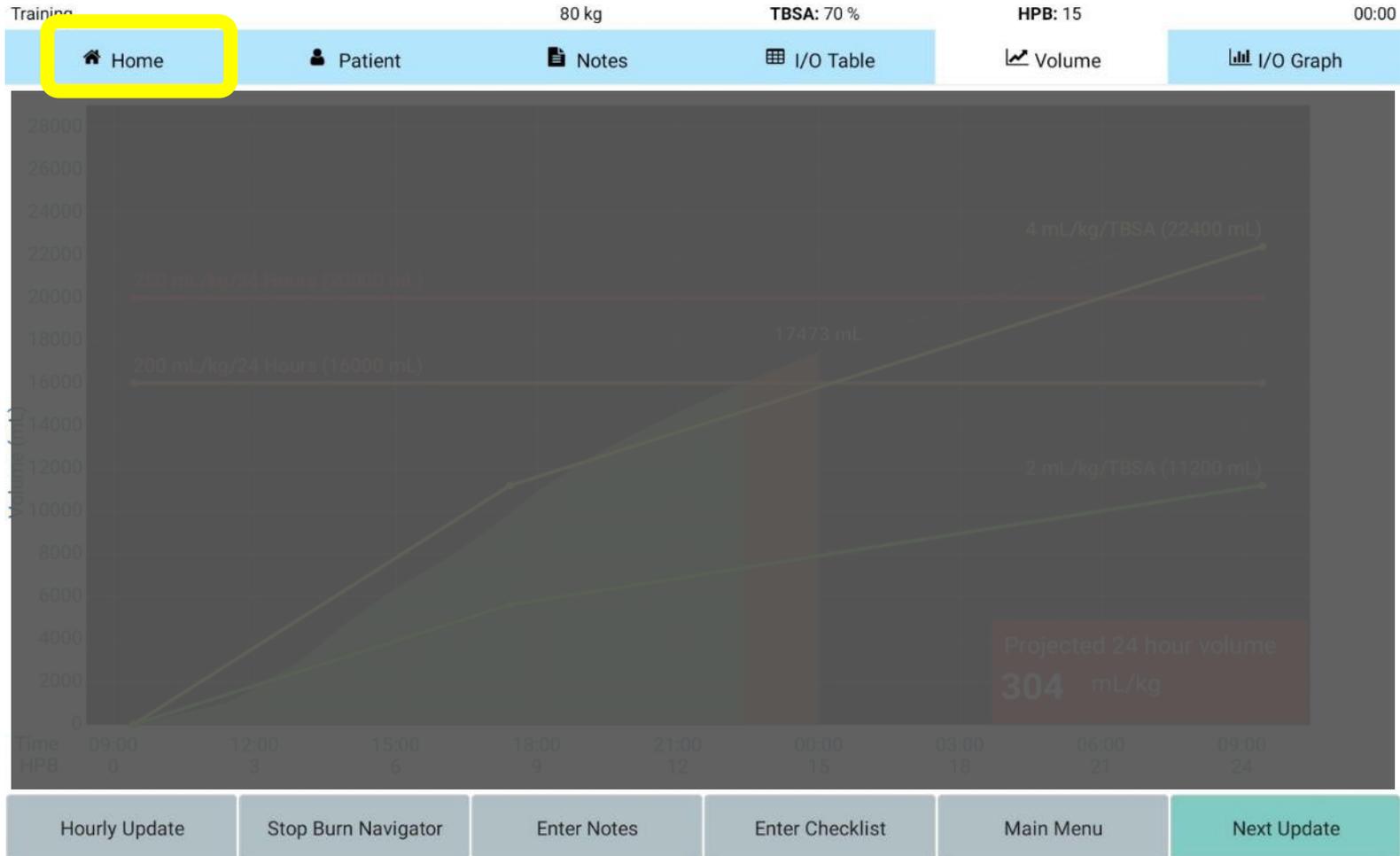
↑

Other Fluids are excluded from the Volume Graph and the 24-hour fluid projection.

# You now see the Volume Graph

## Press "Home" to do another update





press "Next Update"



80 kg                      **TBSA: 70 %**                      **HPB: 5**

**Fluid Update: Urine Data**

Urine Measurement Time

From: 15:00    To: **16:00**    60 mins

Urine output volume

**25** mL                      0.3 mL/kg/hr

Urine output is not measured or unknown

**Back**    **Next**

**Enter UO,  
then press “Next”**

80 kg                      TBSA: 70 %                      HPB: 5

Fluids Given

From: 15:00                      To: 16:00                      60 mins

Primary fluid was: Lactated Ringer's ▼

Infusion rate:                      Infusion volume:

1210 | mL/hr                      1210 mL

Average rate: 1210 mL/hr

Back                      Next

Confirm the pump wasn't changed: **press Next**

Because you chose “Repeat” last time, the Albumin 5% is listed again.

**Press “Next”**

80 kg      TBSA: 70 %      HPB: 4

Additional Fluids

Fluid	Volume	Repeat
x 5% Albumin	70  mL	<input checked="" type="checkbox"/>
Select a fluid type... ▼		

Total Additional Fluids: 70 mL

**WARNING:** Giving fluids in addition to the primary resuscitation fluid may require an adjustment to the fluid infusion rate by the user, different from the rate recommended by Burn Navigator. The attending physician should be contacted to determine the appropriate fluid infusion rate.

80 kg

TBSA: 70 %

HPB: 5

### Patient Recommendation

Previous infusion rate: 1210 mL/hr

Select fluid type:

Lactated Ringer's ▼

Recommended rate:

1210 mL/hr

Enter new rate:

1210| mL/hr

--- %

--- %

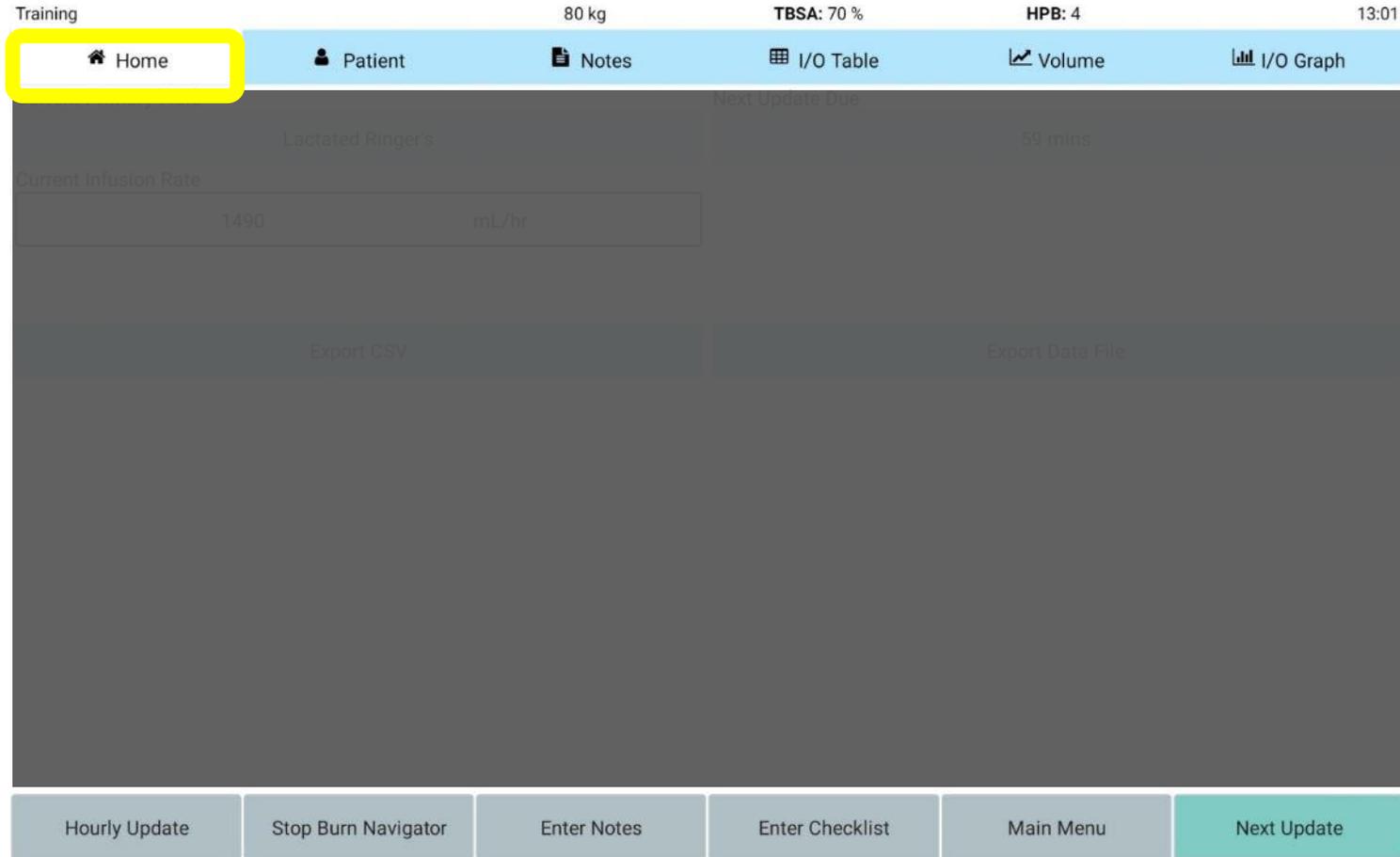
Back

Enter

**Accept this recommendation**

Let's do one more update

Press "Home"



then "Next Update"

80 kg                      TBSA: 70 %                      HPB: 6

### Fluid Update: Urine Data

Urine Measurement Time

From: 16:00      To: 17:00      60 mins

Urine output volume

47| mL      0.6 mL/kg/hr

Urine output is not measured or unknown

Back      Next

**Enter UO**

80 kg                      TBSA: 70 %                      HPB: 6

Fluids Given

From: 16:00                      To: 17:00                      60 mins

Primary fluid was:

Infusion rate:                      Infusion volume:

mL/hr                       mL

Confirm the pump wasn't changed: **press Next**

80 kg      TBSA: 70 %      HPB: 6

Additional Fluids

Fluid	Volume	Repeat
<input checked="" type="checkbox"/> Plasma	250 mL	<input type="checkbox"/>
<input checked="" type="checkbox"/> 5% Albumin	70 mL	<input checked="" type="checkbox"/>

Select a fluid type... ▼

Total Additional Fluids: 320 mL

**WARNING:** Giving fluids in addition to the primary resuscitation fluid may require an adjustment to the fluid infusion rate by the user, different from the rate recommended by Burn Navigator. The attending physician should be contacted to determine the appropriate fluid infusion rate.

**Add Plasma, 250 mL**  
(without repeat)

80 kg

TBSA: 70 %

HPB: 6

### Safety questions

Is the patient hypotensive?  Yes  No

Is the patient hyperglycemic?  Yes  No

Is the patient on pressors?  Yes  No

Is the patient on diuretics?  Yes  No

Back

Next

# Answer safety questions

80 kg

TBSA: 70 %

HPB: 6

### Patient Recommendation

Previous infusion rate: 1210 mL/hr

Select fluid type:

Lactated Ringer's ▼

Recommended rate:

1030 mL/hr

Enter new rate:

1030 mL/hr

↓ -15 %

↓ -15 %

Alert! Consult with attending physician about an appropriate fluid rate during presence of hypotension, hyperglycemia, pressors or diuretics.

Back

Enter

If you say “Yes” to a safety question, you’ll see this red text alert

80 kg                      TBSA: 70 %                      HPB: 6

Patient Recommendation

Previous infusion rate: 1210 mL/hr

Select fluid type:                      Lactated Ringer's ▼

Recommended rate:                      Enter new rate:

1030 mL/hr                      1210 | mL/hr

↓ -15 %                      --- %

Alert! Consult with attending physician about an appropriate fluid rate during presence of hypotension, hyperglycemia, pressors or diuretics.

Back                      Enter

Change “New rate” to be the “Previous” rate (**1210 mL/hr**), because patient was hypotensive

80 kg

**TBSA:** 70 %

**HPB:** 5

### Attention!

When choosing an infusion rate other than what is recommended the following information is required.

Select rationale:

**Patient is hypotensive** ▼

Enter attending physician:

**MD**

Enter caregiver:

**RN**

Back

Next

Choose a rationale why the recommendation wasn't accepted (you will see this later in the Notes)

# Main Screens

Six main tabs

HPB - Hours Post Burn

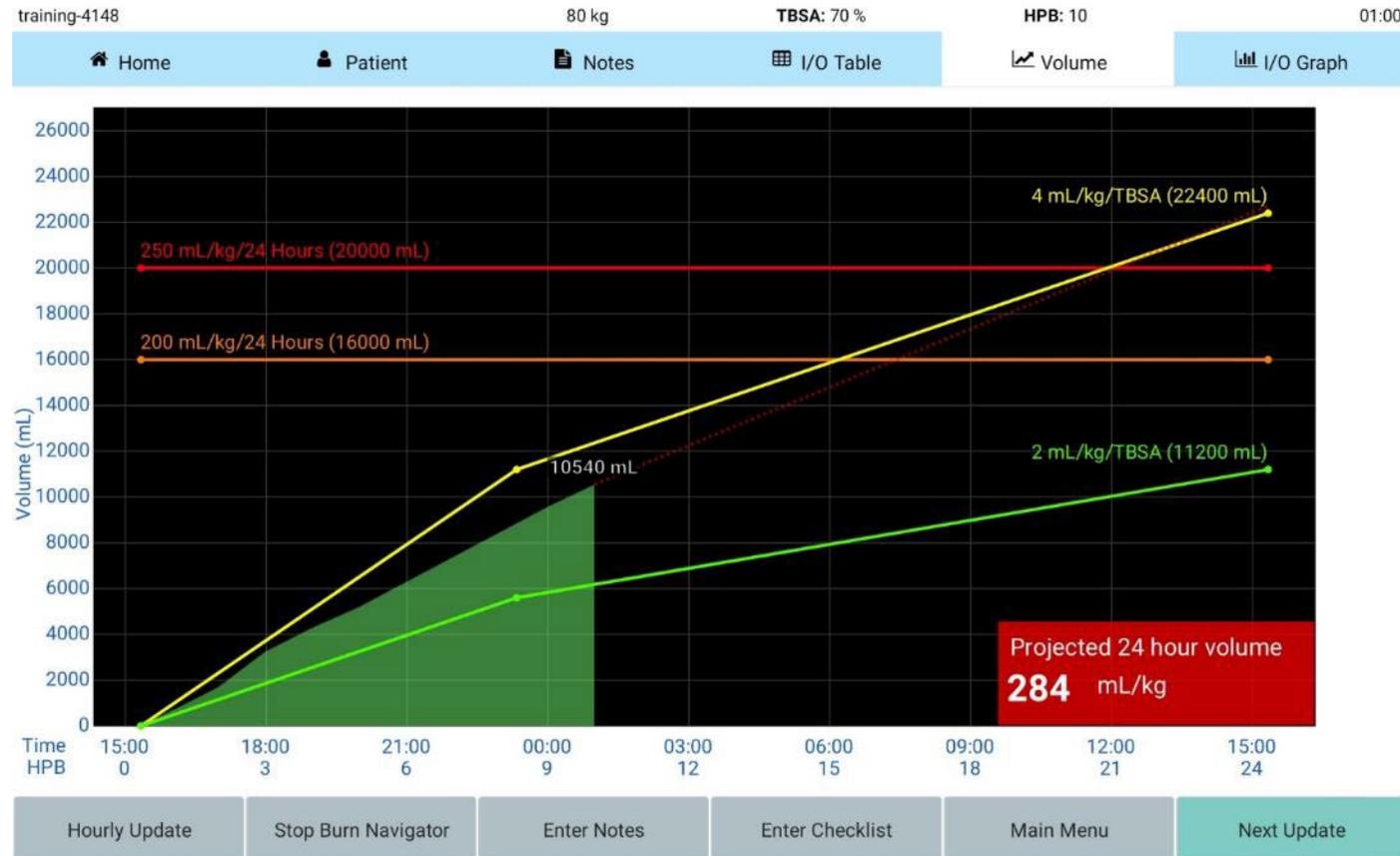


# After each update, you'll see the Volume graph

Shown are all fluids given to the patient since time of burn

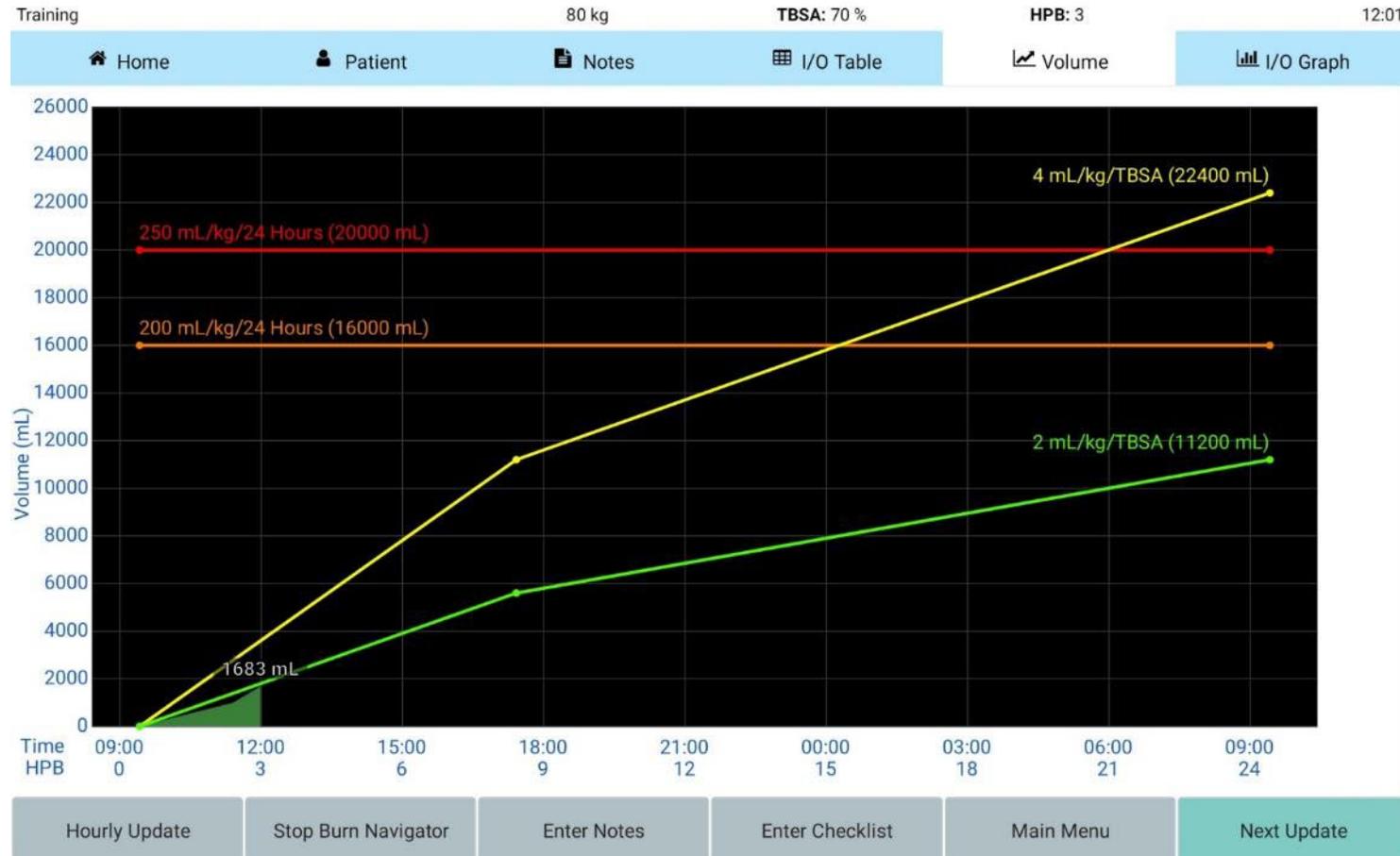
The “green mountain” of fluids grows over time

How much fluid has this patient received??



# Resuscitation guidelines:

- 4mL/kg/TBSA (Parkland) in yellow
- 2mL/kg/TBSA (Modified Brooke) in green



## Alert lines

**250 mL/kg**  
in 24 hours  
**(Ivy Index) in red**

**200 mL/kg**  
in 24 hours  
**in orange**



# 24-hour fluid projections:

- Shows by HPB 10
- Based on current rate & past fluids

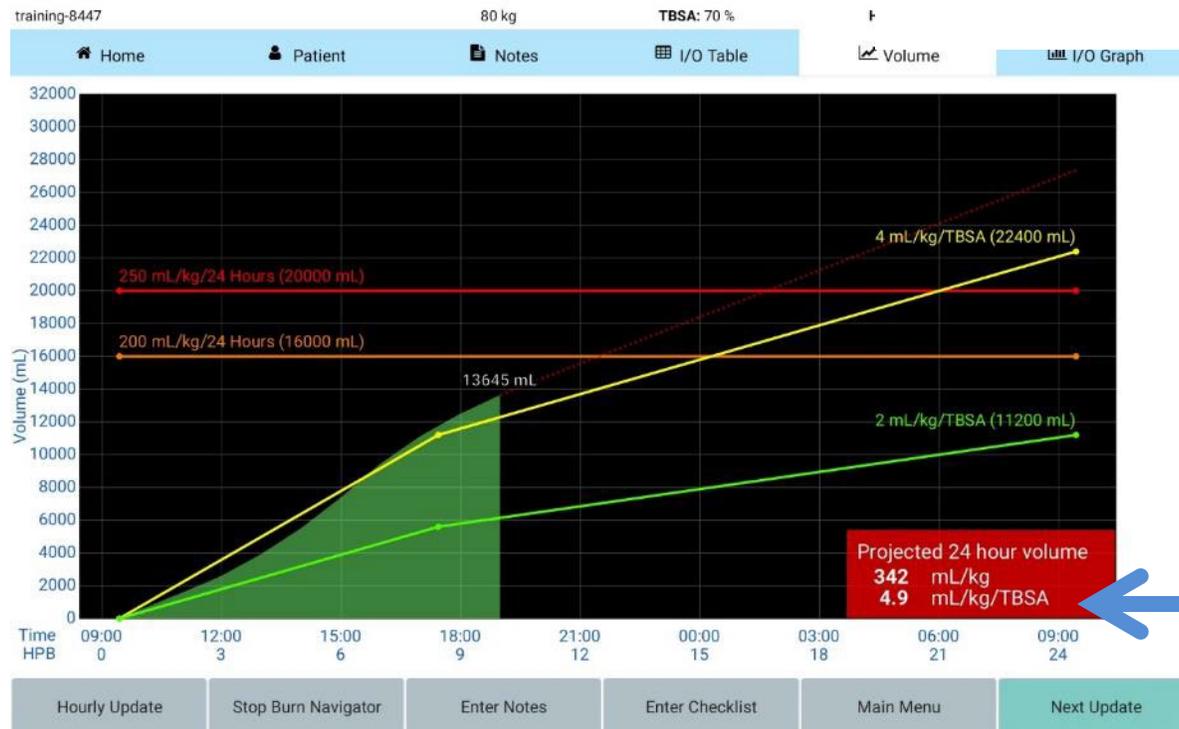
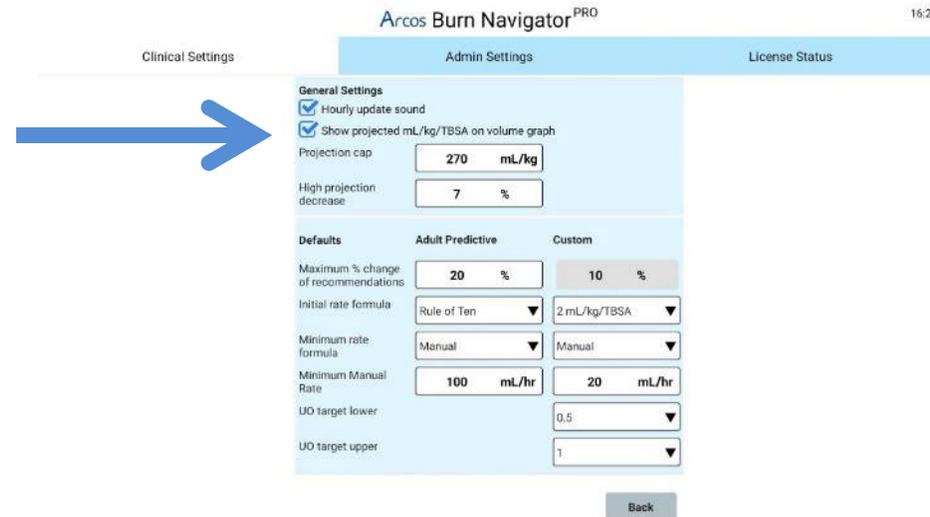


# The label will turn red if either:

- ml/kg is above 250, or
- ml/kg/TBSA is above 6.0



Check the box in order to show projected mL/kg/TBSA on volume graph



Projected volume graph in mL/kg/TBSA

# The label will turn orange if:

- ml/kg is between 200 and 250
- ml/kg/TBSA is between 5.0 and 6.0

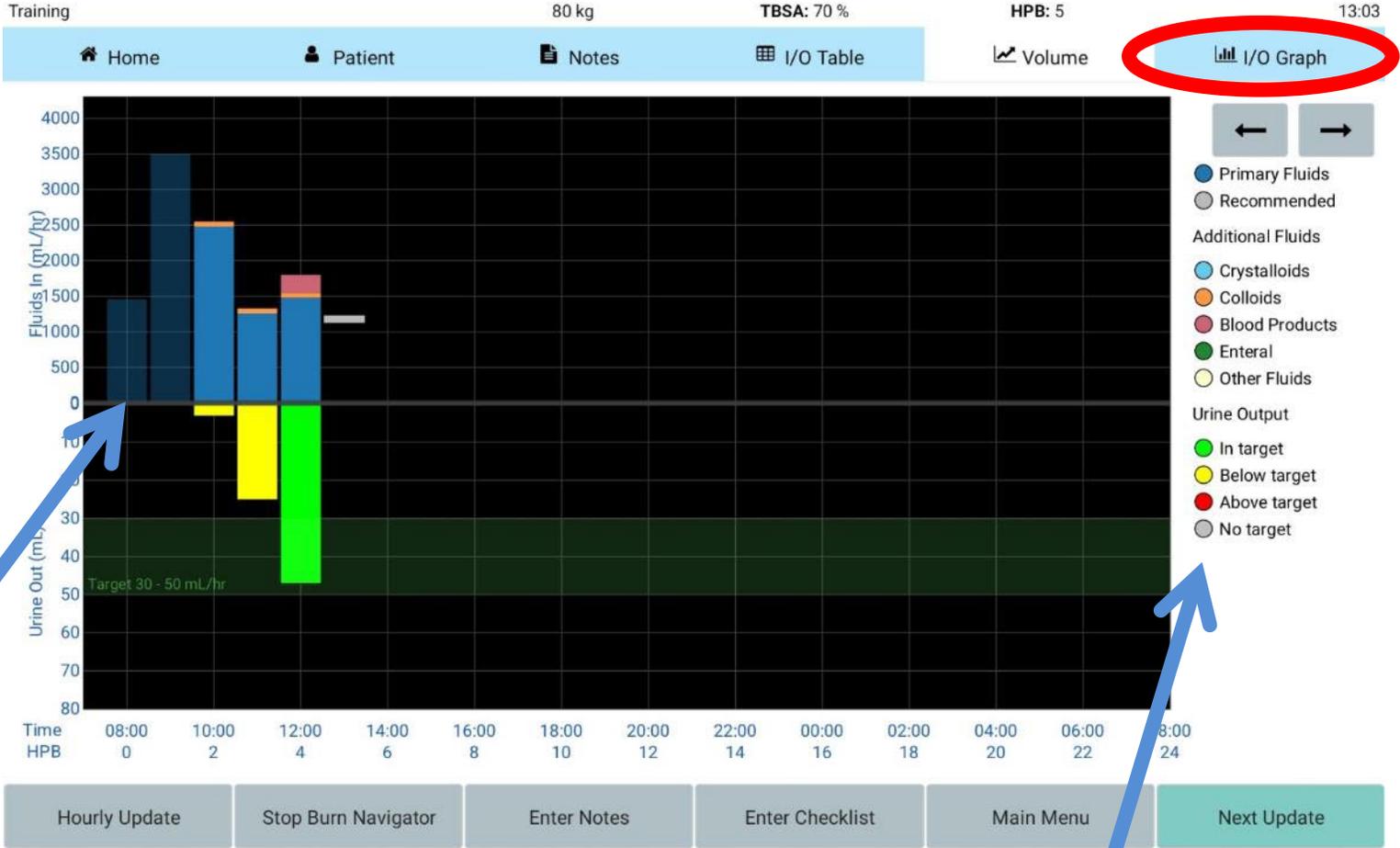


# The label will be black if both:

- ml/kg is less than 200
- ml/kg/TBSA is less than 5.0



# Press the "I/O Graph" tab



Pre-Burn Navigator fluids have transparent bars

Legend

# Home Screen

training-7795      80 kg      TBSA: 65 %      HPB: 1      10:36

Home   Patient   Notes   I/O Table   Volume   I/O Graph

Current Primary Fluid: Lactated Ringer's      Next Update Due: 24 mins

Current Infusion Rate: 1490 mL/hr

**Current Protocol**

- Adult predictive algorithm**  
UO target: 30 to 50 mL/hr
- Custom protocol**  
UO target: 30 to 50 mL/hr
- Monitor only**

Export CSV      Export Data File

Functional buttons



Hourly Update   Stop Burn Navigator   Enter Notes   Enter Checklist   Main Menu   Next Update

# Hourly Update Button



**Enter** new fluid update if it is time to do so

**Edit** within 10 minutes after an update ('grace period')

# End Decision Support Button

**“Stop Burn Navigator”**  
will close and inactive  
the patient file

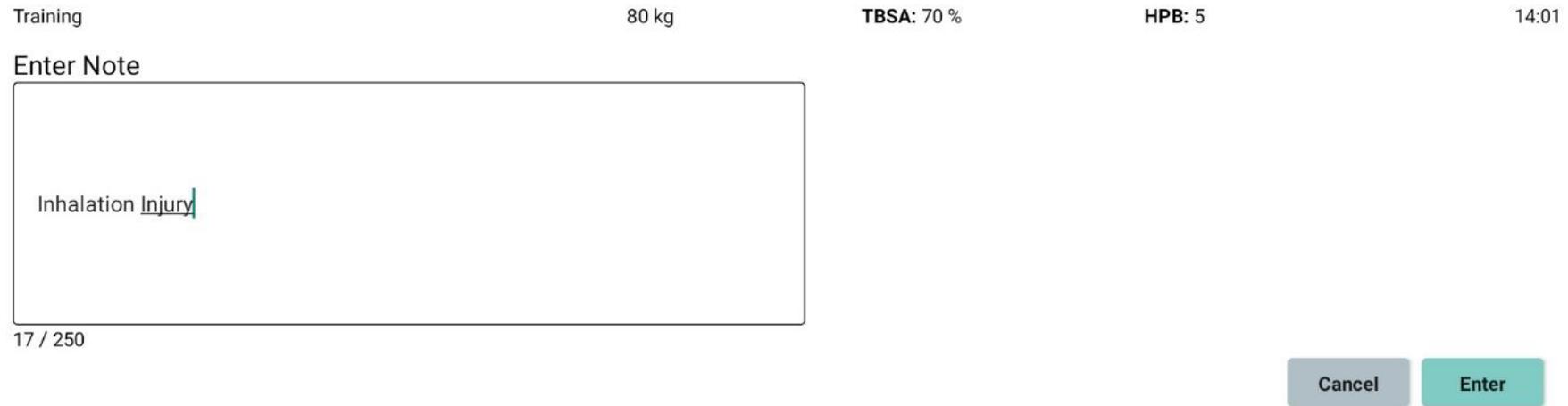


**Careful!** Once you've ended decision support, you won't be able to add or edit any patient information!

# Enter Notes Button



Press “Enter Notes”



Press “Enter” to  
save the note

# Enter Checklist Button



80 kg      TBSA: 70 %      HPB: 5

<b>Enter Vitals</b>		<b>Check Extremities</b>	
✓ Systolic BP	85 mmHg	<input checked="" type="checkbox"/> Elevate burned extremities	
✓ Diastolic BP	58 mmHg	<input checked="" type="checkbox"/> Check for tightness	
CVP	mmHg		
✓ Heart Rate	70 bpm		
<b>Enter Bladder Pressure</b>		✓ Left Upper	normal
Bladder Pressure	mmHg	✓ Right Upper	weak
<b>Enter Labs</b>		✓ Left Lower	normal
ScvO2	%	✓ Right Lower	weak
✓ Lactate	2.1 mg/dL		
Base Excess	mEq/L		
✓ Hemoglobin	10.5 g/dL		
		Cancel	Enter

“Enter Checklist” shows the checklist screen

We’ve already done one, so just continue for now!

1	2	3	4	5	6	7	8	9	0	←	
Clear										.	Enter

# Home Screen

You can  
change  
current  
rate here

For  
protocol  
changes

training-7795 80 kg TBSA: 65 % HPB: 1 10:36

Home Patient Notes I/O Table Volume I/O Graph

Current Primary Fluid Lactated Ringer's Next Update Due 24 mins

Current Infusion Rate 1490 mL/hr

Current Protocol

Adult predictive algorithm  
UO target: 30 to 50 mL/hr

Custom protocol  
UO target: 30 to 50 mL/hr

Monitor only

Export CSV Export Data File

Hourly Update Stop Burn Navigator Enter Notes Enter Checklist Main Menu Next Update

**Example:** You may have a patient who presents with myoglobinuria. Your initial protocol could be 75-100mL UO. After the myoglob. clears, you can change to your normal protocol (e.g., 30-30 mL UO).

# Press the “Patient” tab

This screen lets you edit patient information

If you’ve mapped a more accurate TBSA, edit it here!

You can now edit the patient height.

The screenshot shows a medical software interface with a top navigation bar containing 'Home', 'Patient' (circled in red), 'Notes', 'I/O Table', 'Volume', and 'I/O Graph'. The main area is divided into two columns of input fields. The left column contains: Cite ID (Training), Weight (80 kg), Size of Burn (TBSA) (70 %), Height (in./cm.), Confounders? (Unknown), and Elapsed Time Since Burn (HPB) (4 hrs. 36 mins.). The right column contains: Protocol (view only) (Adult predictive algorithm), Minimum Rate After 8 HPB (100 mL/hr), Fluids Given Pre-Burn Navigator (1000 mL), Urine Output Pre-Burn Navigator (mL), and a table of burn statistics: Burn Time (09:25 HPB: 0), Software Started: (11:25 HPB: 2), and Software Ended: (-- : -- HPB: --). A bottom bar contains buttons for 'Hourly Update', 'Stop Burn Navigator', 'Enter Notes', 'Enter Checklist', 'Main Menu', and 'Next Update'.

# Press the “Notes” tab

Your notes and system generated notes are on the left

Training 80 kg TBSA: 70 % HPB: 5 14:03

Home Patient **Notes** I/O Table Volume I/O Graph

**Notes:**

**14:01 HPB 5**  
Inhalation Injury

**14:01 HPB 5**  
Recommended rate: 1190  
Entered rate: 1490  
Attending: MD  
Caregiver: RN  
Rationale: Patient is hypotensive

**11:26 HPB 2**  
Resuscitation Plan:  
Adult predictive algorithm  
Target UO 30-50 mL/hr  
Initial formula: 3 mL/kg/TBSA  
Initial formula rate: 1050 mL/hr  
Entered rate: 1050 mL/hr  
Max recommendation: 2000 mL/hr  
Min recommendation 1-8 HPB: 700 mL/hr  
Min recommendation 9+ HPB: 100 mL/hr  
Recommendation changes +/- 20%  
Burn Navigator Version: 6.7.1

**11:26 HPB 2**  
Myoglobinuria? Unknown  
Hyperglycemia? Unknown  
High blood alcohol? Unknown  
End stage renal disease? Unknown  
Congestive heart failure? Unknown

**Checklists:**

**14:02 HPB 5**  
Checklist

Systolic BP = 85 mmHg  
Diastolic BP = 58 mmHg  
CVP = -- mmHg  
Heart Rate = 70 bpm  
Bladder Pressure = -- mmHg  
ScvO2 = -- %  
Lactate = 2.1 mg/dL  
Base Excess = -- mEq/L  
Hemoglobin = 10.5 g/dL  
Left Upper pulse = normal  
Right Upper pulse = weak  
Left Lower pulse = normal  
Right Lower pulse = weak  
Burned extremities elevated  
Tightness checked

Hourly Update Stop Burn Navigator Enter Notes Enter Checklist Main Menu Next Update

Checklists are on the right

The most recent notes and checklists are at the top  
**Scroll down to see older entries!**

Each note and checklist is time-stamped with hour post burn!

# Resuscitation Plan and Confounders are the first notes

Training 80 kg TBSA: 70 % HPB: 5 14:03

Home Patient Notes I/O Table Volume I/O Graph

**Notes:**

**14:01 HPB 5**  
Inhalation Injury

---

**14:01 HPB 5**  
Recommended rate: 1190  
Entered rate: 1490  
Attending: MD  
Caregiver: RN  
Rationale: Patient is hypotensive

---

**11:26 HPB 2**  
Resuscitation Plan:  
Adult predictive algorithm  
Target UO 30-50 mL/hr  
Initial formula: 3 mL/kg/TBSA  
Initial formula rate: 1050 mL/hr  
Entered rate: 1050 mL/hr  
Max recommendation: 2000 mL/hr  
Min recommendation 1-8 HPB: 700 mL/hr  
Min recommendation 9+ HPB: 100 mL/hr  
Recommendation changes: +/- 20%  
Burn Navigator Version: 6.7.1

---

**11:26 HPB 2**  
Myoglobinuria? Unknown  
Hyperglycemia? Unknown  
High blood alcohol? Unknown  
End stage renal disease? Unknown  
Congestive heart failure? Unknown

**Checklists:**

**14:02 HPB 5**  
**Checklist**

Systolic BP	=	85 mmHg
Diastolic BP	=	58 mmHg
CVP	=	--- mmHg
Heart Rate	=	70 bpm
Bladder Pressure	=	--- mmHg
ScvO2	=	--- %
Lactate	=	2.1 mg/dL
Base Excess	=	--- mEq/L
Hemoglobin	=	10.5 g/dL
Left Upper pulse	=	normal
Right Upper pulse	=	weak
Left Lower pulse	=	normal
Right Lower pulse	=	weak
Burned extremities elevated		
Tightness checked		

Hourly Update Stop Burn Navigator Enter Notes Enter Checklist Main Menu Next Update

Helpful for reviews, training & quality improvement

# Press the "I/O Table" tab

The I/O Table is a record of all fluid data

Training 80 kg TBSA: 70 % HPB: 5 13:03

Home Patient Notes **I/O Table** Volume I/O Graph

Actual Times (edit)  Hourly Averages

Actual Times(edit)	10:35	11:00	12:00	13:00	(14:00)
Urinary output (mL)		3	25	47	
Urinary Output (mL/kg/hr)		0.1	0.3	0.6	
Recommended Rate (mL/hr)		1050	1260	1480	1180
Actual Primary Rate (mL/hr)	3500	1050	1260	1480	
Actual Primary Volume (mL)	7000	438	1260	1480	
Lactated Ringer's (mL)	7000	438	1260	1480	
Total Additional Fluids (mL)		70	70	320	
Fresh Frozen Plasma (mL)				250	
5% Albumin (mL)		70	70	70	
Total Fluids In (mL)	7000	508	1330	1800	
Total Cumulative Fluids (mL)	7000	7508	8838	10638	
Hypotensive				Yes	
Hyperglycemic				No	
On Pressors				No	
On Diuretics				No	

Hourly Update Stop Burn Navigator Enter Notes Enter Checklist Main Menu Next Update

## “Hourly Averages”

view shows you data  
fitted to clock hours

e.g.:

**13:00 – 14:00**

**14:00 – 15:00**

etc.

Hours are labeled by

HPB:

**Hour Post Burn 1**

**Hour Post Burn 2**

etc.

Training 80 kg TBSA: 70 % HPB: 5 13:03

Home Patient Notes I/O Table Volume I/O Graph

Actual Times (edit)  Hourly Averages

Hours Post Burn (HPB)	HPB0	HPB1	HPB2	HPB3	HPB4	(HPB5)
Clock Hour	8-9	9-10	10-11	11-12	12-13	
Urinary output (mL)			3	25	47	
Urinary Output (mL/kg/hr)			0.0	0.3	0.6	
Recommended Rate (mL/hr)		0	438	1260	1480	1180
Actual Primary Rate (mL/hr)	1458	3500	2479	1260	1480	
Actual Primary Volume (mL)	1458	3500	2480	1260	1480	
Lactated Ringer's (mL)	1458	3500	2480	1260	1480	
Total Additional Fluids (mL)			70	70	320	
Fresh Frozen Plasma (mL)					250	
5% Albumin (mL)			70	70	70	
Total Fluids In (mL)	1458	3500	2550	1330	1800	
Total Cumulative Fluids (mL)	1458	4958	7507	8837	10637	
Hypotensive						Yes
Hyperglycemic						No
On Pressors						No
On Diuretics						No

Hourly Update Stop Burn Navigator Enter Notes Enter Checklist Main Menu Next Update

“Actual Times” view shows you the data when you entered it, e.g.:  
**13:00**  
**14:05**  
**15:03**  
etc.

The columns might not be 60 minutes!!  
They could be:  
65 min  
57 min  
60 min  
etc.

Training 80 kg TBSA: 70 % HPB: 5 13:03

Home Patient Notes I/O Table Volume I/O Graph

Actual Times (edit)  Hourly Averages

Actual Times(edit)	10:35	11:00	12:00	13:00	(14:00)
Urinary output (mL)		3	25	47	
Urinary Output (mL/kg/hr)		0.1	0.3	0.6	
Recommended Rate (mL/hr)		1050	1260	1480	1180
Actual Primary Rate (mL/hr)	3500	1050	1260	1480	
Actual Primary Volume (mL)	7000	438	1260	1480	
Lactated Ringer's (mL)	7000	438	1260	1480	
Total Additional Fluids (mL)		70	70	320	
Fresh Frozen Plasma (mL)				250	
5% Albumin (mL)		70	70	70	
Total Fluids In (mL)	7000	508	1330	1800	
Total Cumulative Fluids (mL)	7000	7508	8838	10638	
Hypotensive				Yes	
Hyperglycemic				No	
On Pressors				No	
On Diuretics				No	

Hourly Update Stop Burn Navigator Enter Notes Enter Checklist Main Menu Next Update

Actual Times (edit)  Hourly Averages

	11:48	13:00	16:00	17:00	18:00	19:00	20:00	21:00	(22:00)
<b>Actual Times(edit)</b>									
<b>Urinary output (mL)</b>	45	45	27	28	35	38	50	45	
<b>Urinary Output (mL/kg/hr)</b>	0.5	0.4	0.3	0.3	0.4	0.5	0.6	0.6	
<b>Recommended Rate (mL/hr)</b>		1050	1050	1160	1320	1500	1500	1400	1200
<b>Actual Primary Rate (mL/hr)</b>	500	1050		1320	1500	1500	1400	1200	
<b>Actual Primary Volume (mL)</b>	1000	1260		1320	1500	1500	1400	1200	
Lactated Ringer's (mL)	1000			1320	1500	1500	1400	1200	
<b>Total Additional Fluids (mL)</b>				70	70	70	320	70	
5% Albumin (mL)				70					
Oral Resus. Solution (mL)									
<b>Total Fluids In (mL)</b>	1000	1260	1120						
<b>Total Cumulative Fluids (mL)</b>	1000	2260	3380						
<b>Hypotensive</b>						No	No		
<b>Hyperglycemic</b>						No	No	No	
<b>On Pressors</b>						No	No	No	
<b>On Diuretics</b>						No	No	No	

**3** UO from 17:00 to 18:00

**1**

Recommended rate (given at 17:00 for the upcoming hour)

**2**

Rate actually given (confirmed at 17:00)

New recommendation at 18:00 for next hour

**4**

# Safety Features

## Recommendations:

- Won't change more than the "cap"
- Max recommended: 2,000mL/hr or less

80 kg      TBSA: 70 %      HPB: 4

Patient Recommendation

Previous infusion rate: 1260 mL/hr

Select fluid type:

Recommended rate: 1490 mL/hr      Enter new rate: 1490 mL/hr

 18 %       18 %

**Minimum rates**  
(edit from  
Patient tab)

Training      80 kg      TBSA: 70 %      HPB: 5      14:01

Home   Patient   Notes   I/O Table   Volume   I/O Graph

Cite ID: Training

Weight: 80 kg

Size of Burn (TBSA): 70 %

Height: -- in.   -- cm.

Confounders?: Unknown

Elapsed Time Since Burn (HPB): 4 hrs.   36 mins

Protocol (view only): Adult predictive algorithm

Minimum Rate After 8 HPB: 100 mL/hr

Fluids Given Pre-Burn Navigator: 1000 mL

Urine Output Pre-Burn Navigator: mL

Burn Time: 09:25   HPB: 0

Software Started: 11:25   HPB: 2

Software Ended: -- : --   HPB: --

Hourly Update   Stop Burn Navigator   Enter Notes   Enter Checklist   Main Menu   Next Update

# Alerts are a Safety Feature

## “Non-Responder” Alert

When patients aren't responding to fluid therapy

Alert!

Urinary output is not responding to fluid therapy. Check Foley catheter for obstruction and check bladder pressure. Patient may be a fluid "non-responder". Contact attending physician.

OK

# Checklists are also a Safety Feature

Other indicators of  
**under-resuscitation**  
or **over-**  
**resuscitation**

training-1399      75 kg      TBSA: 70 %      HPB: 5      19:03

Home    Patient    Notes    I/O Table    Volume    I/O Graph

**Notes:**

**19:02 HPB 5**  
Recommended rate: 940  
Entered rate: 1180  
Attending: MD  
Caregiver: RN  
Rationale: Patient is hypotensive

---

**16:08 HPB 2**  
Resuscitation Plan:  
Adult predictive algorithm  
Target UO 30-50 mL/hr  
Initial formula: 3 mL/kg/TBSA  
Initial formula rate: 980 mL/hr  
Entered rate: 980 mL/hr  
Max recommendation: 2000 mL/hr  
Min recommendation 1-8 HPB: 660 mL/hr  
Min recommendation 9+ HPB: 100 mL/hr  
Recommendation changes: +/- 20%  
Burn Navigator Version: 6.7.1

---

**16:08 HPB 2**  
Myoglobinuria?      Unknown  
Hyperglycemia?      Unknown  
High blood alcohol?      Unknown  
End stage renal disease?      Unknown  
Congestive heart failure?      Unknown

---

**Checklists:**

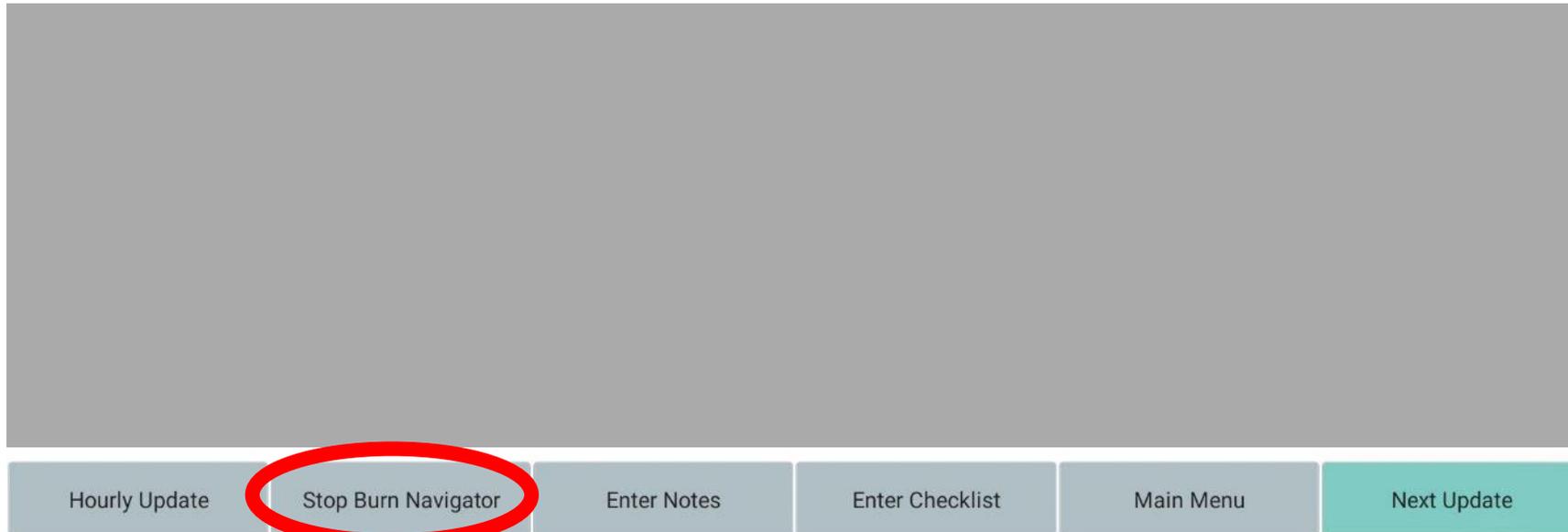
**16:09 HPB 2**  
**Checklist**  
Systolic BP      = 85 mmHg  
Diastolic BP      = 64 mmHg  
CVP      = --- mmHg  
Heart Rate      = 115 bpm  
Bladder Pressure      = --- mmHg  
ScvO2      = --- %  
Lactate      = 2.1 mg/dL  
Base Excess      = --- mEq/L  
Hemoglobin      = 10.5 g/dL  
Left Upper pulse      = normal  
Right Upper pulse      = weak  
Left Lower pulse      = normal  
Right Lower pulse      = weak  
Burned extremities elevated  
Tightness checked

Hourly Update    Stop Burn Navigator    Enter Notes    Enter Checklist    Main Menu    Next Update

# Keep in Mind!

Recommendations are only recommendations!

Understand the whole clinical picture,  
communicate with the attending physician, and  
do what's best for the patient



When resuscitation  
is over, press  
**“Stop Burn Navigator”**

# End Decision Support Rationale

Training

80 kg

TBSA: 70 %

HPB: 17

02:34

Confirmation Requested!

Please select a rationale for ending decision support

Met resuscitation end points

Physician direction

Comfort measures

Patient death

Unknown

Cancel

End

Your selection will be added to the Notes

# FAQs

## What if I change the pump rate in the middle of the hour?

If you change the rate from the HOME screen ...

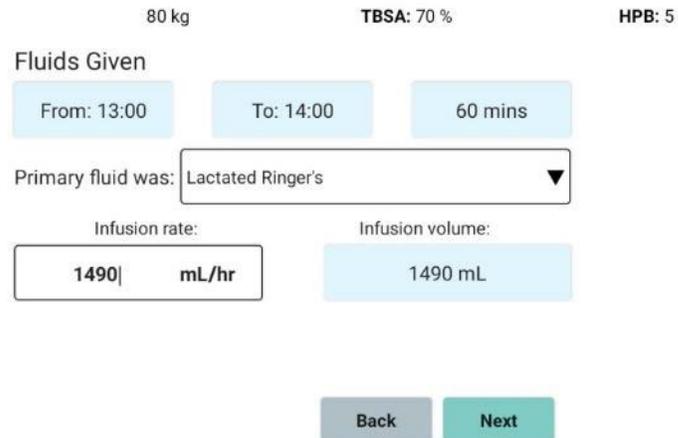


Training 80 kg TBSA: 70 % HPB: 4 13:01

Home Patient Notes I/O Table Volume I/O Graph

Current Primary Fluid Lactated Ringer's Next Update Due 59 mins

Current Infusion Rate 1490 mL/hr



80 kg TBSA: 70 % HPB: 5

Fluids Given

From: 13:00 To: 14:00 60 mins

Primary fluid was: Lactated Ringer's

Infusion rate: 1490 mL/hr Infusion volume: 1490 mL

Back Next

...the average rate and volume are calculated for that hour for you in the next update!

# Arcos™

## Burn Navigator®

### Questions?



Arcos customer support:

877.542.8025

[support@arcosmedical.com](mailto:support@arcosmedical.com)