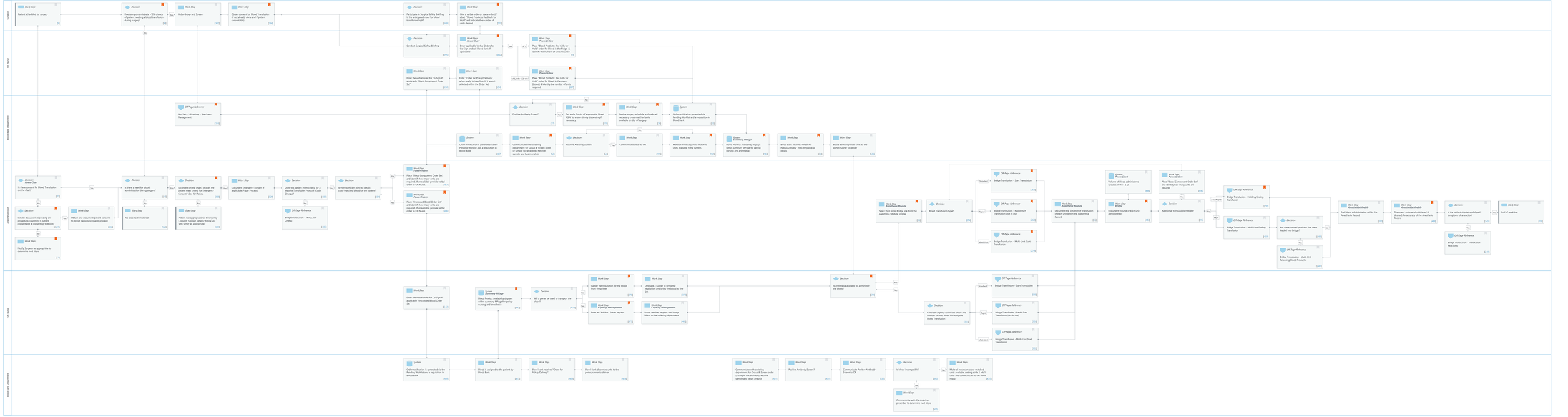
Niagara Health System

Future State Perioperative - Anesthesiology - Blood Transfusion in OR

Line Separation: **Swim Lanes** | Page Orientation: **Landscape**

Last updated by Kristen Marshall (Niagara Health) Jan 30, 2025 (v2)(Page 5 of 7) - 2 Pathways



© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Workflow Details:

Workflow Name: Perioperative - Anesthesiology - Blood Transfusion in OR
Workflow State: Future State
Workstream: Intradepartmental
Venue: Perioperative
Client Owner: Boichuk (Doan), Kristen Rachel
Cerner Owner: Chariton,Caitlin M
Standard: Yes
Related Workflow(s):
Tags:

Workflow Summary:

Service Line: Anesthesiology
Related Solution(s): Blood Bank Transfusion
Bridge Transfusion Administration
Surgical Management
Project Name: Niagara Health System:OPT-0297674:NIAG_CD Niagara HIS RFP
TestBuilder Script(s):
Cerner Workflow ID: 9846 (v. 11.0)
Client Workflow ID: 242
Workflow Notes: This workflow outlines the process for blood administration in the OR setting, to be performed by the anesthesia provider. In summary, it consists of documenting blood volumes within the Anesthesia Record, while utilizing Bridge for scanning/verification purposes, replacing a dual-witness paper verification process.

For blood administration that crosses venues (into or out of the OR), the cli nician ending the transfusion of a specific unit of blood should be responsible for documenting the volume based on their defined workflow (Anesthesia Record for Anesthesia, Bridge for nursing).

If Anesthesia is not in scope, volumes would likely be included in Bridge. If Bridge is not in scope, then
the anesthesia module steps would remain, but the verification process would revert to a dual witness paper process.

If not following
the recommendation to transfer patients to an OR location, the prompt for Volume cannot be removed. For this scenario, it may be possible to block the Volume from Bridge via the interface. If

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

that's not an option, then the volume can be charted in Bridge, and an Action can be used to document the blood in the Anesthesia Record (as opposed to the Intake Fluid), including the name and amount. However, this is not the optimal approach as it prevents the anesthesia provider from being able to view all intraoperative I&O from a single view. The last option would be to not utilize Bridge in the OR, but that too isn't optimal as it increases the risk of administering improper blood.

Introduced By: WS 4
Validated By: WS 5.2

Swim Lane:
Role(s): Surgeon
Department(s):
Security Position(s): Physician - General Surgery

Start/Stop [9]
Description: Patient scheduled for surgery

Decision [10]
Description: Does surgeon anticipate >10% chance of patient needing a blood transfusion during surgery?
Comments: Ideally, this decision would be made on the PSS/PSAC visit*

Work Step [302]
Description: Order Group and Screen

Work Step [360]
Description: Obtain consent for Blood Transfusion (if not already done and if patient consentable)
Comments: Paper process

Decision [509]
Description: Participate in Surgical Safety Briefing; Is the anticipated need for blood transfusion high?

Work Step [511]
Description: Give a verbal order or place order (if able) "Blood Products: Red Cells for Hold" and indicate the number of units desired

Cerner
© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Comments: Note: Blood dispensed in a box is only reusable for 6 hours after dispensing. This order is placed at the beginning of the Case.

Swim Lane:

Role(s): OR Nurse [Custom]

Department(s):

Security Position(s):

Decision [295]

Description: Conduct Surgical Safety Briefing

Work Step [492]

Description: Enter applicable Verbal Orders for Co-Sign and call Blood Bank if applicable

Method: PowerChart

Comments: Note: Blood dispensed in a box is only reusable for 6 hours after dispensing. This order is placed at the beginning of the Case.

Work Step [11]

Description: Place "Blood Products: Red Cells for Hold" order for Blood in the fridge & identify the number of units required

Method: PowerOrders

Comments: The surgeon will place appropriate product orders with this order, but no transfusion orders at this time.

No pickup order will be required in this circumstance as blood bank assumes they are coming to get the red cells as soon as the Hold order is entered.

Work Step [550]

Description: Enter the verbal order for Co Sign if applicable "Blood Component Order Set"

Work Step [554]

Description: Enter "Order for Pickup/Delivery" when ready to transfuse (if it wasn't selected within the Order Set)

Work Step [297]

Description: Place "Blood Products: Red Cells for Hold" order for Blood in the room (boxed) & identify the number of units required

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Method: PowerOrders

Comments: The surgeon will place appropriate product orders with this order, but no transfusion orders at this time.

No pickup order will be required in this circumstance as blood bank assumes they are coming to get the red cells as soon as the Hold order is entered.

Swim Lane:

Role(s): Blood Bank Department

Department(s): Laboratory

Security Position(s):

Off Page Reference [258]

Workflow Link: Gen Lab - Laboratory - Specimen Management

Comments: Typically this would occur during a PAT Visit. If not, it can be done during preop on the day of surgery, though that presents a potential for surgical delay due to blood product availability.

Decision [37]

Description: Positive Antibody Screen?

Work Step [175]

Description: Set aside 2 units of appropriate blood ASAP to ensure timely dispensing if necessary

Comments: If the positive antibody screen occurs on the day of surgery, communicate with the OR to determine if the case needs to be delayed until blood is made available.

Work Step [28]

Description: Review surgery schedule and make all necessary cross-matched units available on day of surgery

Comments: Some facilities may require a re-draw and re-type in Preop. Others may opt to extend a previous specimen (e.g. from PAT) up to a pre-defined time-frame (e.g. 14 days).

System [22]

Description: Order notification generated via Pending Worklist and a requisition in Blood Bank

Cerner

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

System [187]

Description: Order notification is generated via the Pending Worklist and a requisition in Blood Bank

Work Step [52]

Description: Communicate with ordering department for Group & Screen order (if sample not available). Receive sample and begin analysis

Comments: If a sample isn't already available in the lab, typically the sample is obtained in the OR and the OR Nurse would initiate a transport with a porter to pickup the sample or other perioperative personnel would be delegated to run the sample for the OR.

Decision [54]

Description: Positive Antibody Screen?

Work Step [195]

Description: Communicate delay to OR

Work Step [192]

Description: Make all necessary cross-matched units available in the system.

Comments: If blood is needed more urgently, the OR should call Bloodbank and let them know the need for blood is urgent- and Bloodbank will call the OR only if they are requested to do so.

System [183]

Description: Blood Product availability displays within summary MPage for periop nursing and anesthesia

Method: Summary MPage

Comments: Summary MPage updates and a notification should pop-up in Millennium

Work Step [30]

Description: Blood bank receives "Order for Pickup/Delivery" indicating pickup details

Comments: This order is ONLY required when "Blood Component Order Set" is ordered without this checked off. In that circumstance, the Nurse should enter the "Order for Pickup/Delivery" when they are ready to transfuse.

Work Step [536]

Description: Blood Bank dispenses units to the porter/runner to deliver

Cerner © Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Swim Lane:

Role(s): Anesthesiologist

Department(s):

Security Position(s): Physician - Anesthesiology
Perioperative - CRNA
Perioperative - CRNA Independent
Physician - Anesthesiology Resident

Work Step [167]

Description: Place "Blood Component Order Set" and identify how many units are required. If unavailable provide verbal order to OR Nurse.

Method: PowerOrders

Comments: An "Order for Pickup/Delivery" would need to be entered by either the Nurse or Anesthesia.

Off Page Reference [263]

Workflow Link: Bridge Transfusion - Start Transfusion

Value Impact: Patient Safety

Comments: This WF outlines the generic steps within Bridge to start a transfusion, but there are some key differences unique to anesthesia.

Additionally, vitals do not need to be captured within Bridge as they will already be captured on the
Anesthesia Record.

System [486]

Description: Volume of Blood administered updates in the I & O

Method: PowerChart

Work Step [496]

Description: Place "Blood Component Order Set" and identify how many units are required

Method: PowerOrders

Decision [71]

Description: Is there consent for Blood Transfusion on the chart?

Method: PowerChart

Cerner

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Decision [44]

Description: Is there a need for blood administration during surgery?

Decision [328]

Description: Is consent on the chart? or does the patient meet criteria for Emergency Consent? (See NH Policy)

Comments: Treatment may be administered without consent to a person who is incapable if in the opinion of the health care practitioner proposing the treatment: there is an emergency; the delay required to obtain consent on the patient's behalf will put the patient at risk of sustaining serious bodily harm; and there is no reason to believe that the person while capable expressed a wish not to have the treatment. Other reasons: the patient cannot give or refuse consent to the treatment because of language barrier or because the person has a disability that prevents the necessary communication; the health care practitioner has no reason to believe that the patient does not want the treatment.

Work Step [329]

Description: Document Emergency consent if applicable (Paper Process)

Decision [402]

Description: Does this patient meet criteria for a Massive Transfusion Protocol (Code Omega)?

Decision [134]

Description: Is there sufficient time to obtain cross-matched blood for the patient?

Work Step [416]

Description: Place "Uncrossed Blood Order Set" and identify how many units are required. If unavailable provide verbal order to OR Nurse

Method: PowerOrders

Comments: "Order for Pickup/ Delivery" should be pre-checked as part of this order set.

Off Page Reference [251]

Workflow Link: Bridge Transfusion - Holding/Ending Transfusion

Value Impact: Patient Safety

Comments: This WF outlines the generic steps within Bridge, but the steps for

Cerner © Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

charting Vitals should be disregarded for Anesthesia.

Work Step [35]

Description: Select the Cerner Bridge link from the Anesthesia Module toolbar

Method: Anesthesia Module

Comments: This will launch Bridge and pass the user credentials, keeping the provider from having to enter login information again.

Decision [274]

Description: Blood Transfusion Type?

Off Page Reference [268]

Workflow Link: Bridge Transfusion - Rapid Start Transfusion (not in use)

Comments: This WF outlines the generic steps within Bridge to start a rapid transfusion, but there are some key differences unique to anesthesia.

Additionally, vitals do not need to be captured within Bridge as they will already be captured on the
Anesthesia Record.

Work Step [65]

Description: Document the initiation of transfusion of each unit within the Anesthesia Record

Method: Anesthesia Module

Work Step [483]

Description: Document volume of each unit administered

Method: Bridge

Comments: Bridge Blood Volumes pull into the I&O in PowerChart (Any volumes of Blood Products documented in the Anesthesia Record do not contribute to the I & O to avoid duplication)

Decision [115]

Description: Additional transfusions needed?

Work Step [110]

Description: End blood administration within the Anesthesia Record

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Method: Anesthesia Module

Work Step [488]

Description: Document volume administered (if desired) for accuracy of the Anesthetic Record

Method: Anesthesia Module

Comments: The volume of Blood Administered documented in the Anesthetic Record will not contribute to the total Intake and Output in the Anesthetic Record or PowerChart I&O (this pulls from Bridge)

Decision [245]

Description: Is the patient displaying delayed symptoms of a reaction?

Start/Stop [119]

Description: End of workflow

Decision [327]

Description: Initiate discussion depending on procedure/condition. Is patient consentable & consenting to Blood?

Comments: This would be obtained via paper signature and scanned into PowerChart as e-signature is only being used currently in Registration areas.

Work Step [316]

Description: Obtain and document patient consent to blood transfusion (paper process)

Start/Stop [160]

Description: No blood administered

Start/Stop [322]

Description: Patient not appropriate for Emergency Consent. Support patient/ follow up with family as appropriate.

Off Page Reference [405]

Workflow Link: Bridge Transfusion - MTP/Code Omega

Off Page Reference [459]

Workflow Link: Bridge Transfusion - Multi-Unit Ending Transfusion

Cerner © Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Decision [463]

Description: Are there unused products that were loaded into Bridge?

Work Step [77]

Description: Notify Surgeon as appropriate to determine next steps

Comments: Possible options:
- Obtain autologous unit from patient
- Plan for use of
volume expanders
- Cancel surgery

Off Page Reference [279]

Workflow Link: Bridge Transfusion - Multi-Unit Start Transfusion

Comments: This WF outlines the generic steps within Bridge to start a rapid transfusion, but there are some key differences unique to anesthesia.

Additionally, vitals do not need to be captured within Bridge as they will already be captured on the
Anesthesia Record.

Off Page Reference [249]

Workflow Link: Bridge Transfusion - Transfusion Reactions

Off Page Reference [462]

Workflow Link: Bridge Transfusion - Multi-Unit Releasing Blood Products

Swim Lane:

Role(s): OR Nurse [Custom]

Department(s):

Security Position(s): Perioperative - Nurse

Off Page Reference [515]

Workflow Link: Bridge Transfusion - Start Transfusion

Work Step [476]

Description: Gather the requisition for the blood from the printer

Comments: This will automatically print off with an ops job

Cerner © Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Work Step [374]

Description: Delegate a runner to bring the requisition and bring the blood to the OR

Decision [514]

Description: Is anesthesia available to administer the blood?

Comments: Anesthesia will initiate the Blood Transfusion unless they are busy providing care to the patient and the OR Nurse is available to begin the blood transfusion.

Work Step [543]

Description: Enter the verbal order for Co Sign if applicable "Uncrossed Blood Order Set"

System [443]

Description: Blood Product availability displays within summary MPage for periop nursing and anesthesia

Method: Summary MPage

Comments: A notification will also be generated in Millennium to notify staff

Decision [474]

Description: Will a porter be used to transport the blood?

Work Step [475]

Description: Enter an "Ad Hoc" Porter request

Method: Capacity Management

Comments: Follow up with Capacity Management regarding this workstep/ what this will look like.

A requisition is not required in this circumstance because the Porters Phones have the patient details for the Blood Product.

Work Step [481]

Description: Porter receives request and brings blood to the ordering department

Method: Capacity Management

Decision [525]

Description: Consider urgency to initiate blood and number of units when initiating the Blood Transfusion

Cerner

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Off Page Reference [520]
Workflow Link: Bridge Transfusion - Rapid Start Transfusion (not in use)

Off Page Reference [522]
Workflow Link: Bridge Transfusion - Multi-Unit Start Transfusion

Swim Lane:
Role(s): Blood Bank Department
Department(s):
Security Position(s):

System [419]
Description: Order notification is generated via the Pending Worklist and a requisition in Blood Bank

Work Step [427]
Description: Blood is assigned to the patient by Blood Bank

Work Step [469]
Description: Blood bank receives "Order for Pickup/Delivery"

Work Step [424]
Description: Blood Bank dispenses units to the porter/runner to deliver

Work Step [421]
Description: Communicate with ordering department for Group & Screen order (if sample not available). Receive sample and begin analysis

Work Step [431]
Description: Positive Antibody Screen?

Work Step [433]
Description: Communicate Positive Antibody Screen to OR

Decision [440]
Description: Is blood incompatible?

Cerner

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.

Work Step [435]

Description: Make all necessary cross-matched units available, setting aside 2 add'l units and communicate to OR when ready.

Work Step [505]

Description: Communicate with the ordering prescriber to determine next steps

Facilities:

Facility Name: Niagara Falls Site
Status: Approved
Facility Cerner Owner: Kearns,Caitlin M
Facility Client Owner: Boichuk (Doan), Kristen Rachel
Authorize Date: Jan 30, 2024
Facility Comments:

Facility Name: St. Catharines
Status: Approved
Facility Cerner Owner: Kearns,Caitlin M
Facility Client Owner: Boichuk (Doan), Kristen Rachel
Authorize Date: Jan 30, 2024
Facility Comments:

Facility Name: Welland
Status: Approved
Facility Cerner Owner: Kearns,Caitlin M
Facility Client Owner: Boichuk (Doan), Kristen Rachel
Authorize Date: Jan 30, 2024
Facility Comments:

Cerner

© Cerner Corporation. All rights reserved. This document contains Cerner confidential and/or proprietary information belonging to Cerner Corporation and/or its related affiliates which may not be reproduced or transmitted in any form or by any means without the express written consent of Cerner.