

NEWS FROM THE BLOOD MANAGEMENT SUB-COMMITTEE

Summary of Group Project or Activities – Posted June 2024

Name of Project or Activity	Description	Project Status
Activity 1 Practice Advisory for Preoperative Anemia Management and Return on Investment of Preoperative Anemia Programs.	The Subcommittee is focusing on creating a series of practice advisories to educate and help practitioners in adoption of guidelines and implementation of practice advisories for optimal anemia management in cardiovascular surgical patients. The subcommittee has submitted 2 manuscripts to A&A with the goal of publication in the same issue. The first manuscript on “return on investment on preoperative anemia” is in press. The second manuscript on “how to set up anemia clinic and treatment service line” has returned with request for revisions. The revised draft has been resubmitted and is being considered by the journal.	Near completion
Activity 2 Practice Advisory for Cardiac Surgical Patients that Use Direct Oral Anticoagulants (DOACs) and Present for Urgent Surgery	Given significant increase in the incidence of the use of DOACs in cardiovascular surgical patients, and to clarify confusing aspects in the perioperative management of patients taking these medications, the subcommittee is conducting a systematic review to create a focused practice advisory on the use of direct oral anticoagulants, such as direct Xa inhibitors and thrombin inhibitors, and need for urgent or emergent cardiac surgery. This project has been supported by the Clinical Practice Improvement Committee (Chair: Wanda Popescu and Vice Chaired by Dr. Michael Grant) and Standards and Guidelines Committee (Chair: Mike Boisen and Vice Chair: Bessie Kachulis). The Systematic Review is in process currently after working with informationist at Johns Hopkins School of Medicine. All search terms vetted by Nadia Hensley and Ashley Budd (last and first authors) and currently in Covidence for abstract review.	Ongoing
Activity 3: New SCA survey of Patient Blood Management Guidelines	The last survey was published in 2021 and data collected in 2018. The survey asked SCA members questions regarding components of AQI 49 that discuss PBM best practices. The new STS/SCA/AmSect/SABM Patient Blood Management Guidelines were published in 2021. New survey would assess the impact of these guidelines and changes that may have occurred in last 6 years as new data has emerged regarding preoperative anemia treatment, available technologies in viscoelastic testing, ubiquitous use of DOACs in those with atrial fibrillation, etc.	Ongoing
Activity 4 SCA survey on practice patterns in patients with HIT	The prevalence of HIT is increasing, particularly due to increase in the use of mechanical circulatory support (ECMO, other supporting devices). The goal of this activity is to define practice patterns and educate clinicians and other practitioners and help implementing best clinical practices via the development of a Clinical Practice Advisory on Management of Anticoagulation in Patients on Extracorporeal circulatory support who develop HIT. This activity is led by Drs. Mazzeffi (UVA) and Welsby (Duke).	New
Activity 5: Practice advisory for the management of patients taking dual anti-PLT medications who present for cardiac and thoracic surgeries	The goal of this project is to Educate clinicians and other practitioners and help implementing best clinical practices via the development of a Clinical Practice Advisory for Surgical Patients that Use Dual-Anti Platelet Medications and Require Cardiac or Thoracic Surgery. This activity has been supported by The Clinical Practice Improvement Committee (Chaired by Dr. Wanda Popescu and Vice Chaired by Dr. Michael Grant).	New
Activity 6: Creation of Podcasts and other educational materials	The subcommittee has been heavily engaged in creation of educational materials on topics related to optimal patient blood management in cardiac surgery. Drs. Raphael and Hensley created educational modules related to bleeding, coagulation and monitoring of hemostasis that were included in the SCA University and used by members preparing for the ACA certification exam. In addition, to educate clinicians and other practitioners a series of podcasts have been recorded on topics related to PBM in cardiac surgery. There are plans for additional 3 PBM topics to be recorded over the next few months: Acute Normovolemic Hemodilution, Factors Concentrates, Viscoelastic Testing Algorithms to Improve How to Best Treat Patients After Bypass	Ongoing

Summary of Group Meetings – Posted June 2024

Type of Group Meeting	Date	Action Items from Meeting
Zoom call/telephone calls	Every 2-3 months	Drs Raphael, Hensley and other relevant members engage in zoom/telephone calls on average every other month to discuss the progress of various activities and plan for future activities of the subcommittee
In person meeting	May 2023	This meeting occurred during the annual meeting conference in Portland, OR and included all PBM subcommittee members. Topics discussed where the ongoing activity projects and plans for future projects
In Person Meeting	October 2023	This meeting took place during the ASA meeting in San Francisco. Drs. Raphael, Hensley and other members engaged in discussion regarding the various activities of the subcommittee and defined writing groups for the various activities that are currently in different stages of writing and submission for publication

BOARD ACTION REQUESTS *(if any)*

- Action / Request 1: The SCA PBM subcommittee is planning to start discussions with the ASA PBM committee about changing the components of AQI 49 and adding the screening and diagnosis of preoperative anemia as a quality metric to AQI 49. Before engaging in such activity and discussions, we are asking for the approval of the board of directors.

POSTED NOVEMBER 2023

Summary of Group Meeting 1 - Date: 5/8/23

- The group was updated on changes to duration of service on committees/subcommittees/working groups from 3x2-year terms to 2x2-year terms.
- Updates on the Management of Preoperative Anemia project: The project is led by Drs. Nadia Hensley and Jacob Raphael and is a collaboration with the ERACS committee. We are also seeking endorsement from SABM for all sections.

The Preoperative anemia: return-on-investment manuscript has received SABM endorsement and was accepted for publication by A&A. The manuscript is with the publisher.

After a lengthy discussion it was agreed that section 1&2 should be united into one comprehensive manuscript. The main authors/leaders of this manuscript are Nadia Hensley (Hopkins), Prakash Patel (Yale), Matt Warner and Alan Klompas (Both at Mayo). The manuscript will have 2 major parts:

Part 1: Preoperative Anemia in Cardiac Surgery Patients - Definition and Clinical Outcomes.

- Epidemiology of anemia in the cardiac surgery population.
- risk factor for preoperative anemia
- Are current definitions of preop anemia relevant to cardiac surgery patients?
- Effects of preop anemia on blood utilization and postop outcomes

Part 2: Implementation of a preop anemia clinic/service pathway in cardiac surgery.

- Discuss rationale of preoperative anemia clinic
- Overall structure /logistics/resource needed for preoperative anemia clinic
- Challenges in starting a preoperative clinic
- What are the alternatives (if at all) to a preoperative anemia clinic?

- Educational Podcasts: This is a collaboration with the CME committee on creating educational podcasts

For SCA members. The podcasts will be within the SCA University. There were discussions about the next topics that would be good for educational podcast. Potential topics are: Use of POC testing and transfusion algorithms, Management of preoperative anemia, Perioperative management of DOACs, How to minimize hemodilution on CPB. The leaders on this initiative are Ravi Joshi (UTSW), Nadia Hensley (Hopkins), Jenny Kwak (Loyola) and Kelly Ural (Oschner).

- Update on the educational module related to hemostasis and PBM that were developed to assist SCA members in preparation to the ACTA certification examination.
- Since the first rounds of PUF applications and awards have been announced, the subcommittee was updated on this funding opportunity for STS database-based trials on outcomes in cardiac surgery via the Participant User File (PUF) program. There will be a session in the 2024 annual meeting presenting the 4 winning projects and their projects' findings.
- Discussion about potential topics for presentation in SCA 2024.
- Discussion led by Dr. Ravi Joshi (UTSW) about reopening and repeating the PBM practices survey to evaluate any practice changes or practice gaps after the publication of the updated SCA/STS/SABM/AmSECT blood conservation guidelines.

Summary of Group Meeting 2

- Date: There will be a group meeting during the ASA annual meeting in San Francisco

COLLABORATION

- The sub-committee has a collaboration with the ERACS committee working on the pre-operative anemia management clinical practice advisory.
- The sub-committee has a collaboration with Dr. Jennifer Hargrave and the CME committee on the development of a series of podcasts related to PBM. Future podcasts will address topics related to visco-elastic hemostasis testing in cardiac surgery; Do we need perioperative PLT function analysis? Tracking blood utilization as a metric of quality improvement, Preoperative anemia management.

FUTURE PROJECTS

- A survey on HIT and alternative anti-coagulation strategies for patients requiring CPB or MCS. There is a knowledge and practice gap in this field and development of a best practice advisory will be helpful. This will be led by Drs. Welsby (Duke), Mazzeffi (UVA) and Raphael (Jefferson). Plan is to reach out to the PBM subcommittee members, CPI members and the EACTA PBM committee members and to present USA and European practices and perspectives.
- A best clinical practice advisory on management of DOACs in the setting of cardiac and thoracic surgery including bridging strategies (if needed) and management in the settings of emergency surgery.
- A best clinical practice advisory on the management of patients who are taking DAPT

The Subcommittee would like to thank Drs. Wanda Popescu, Michael Grant, Bruce Bollen, Tarra Brakke, the SCA Board of Directors and Dr. Kathy Glass their continued excellent support.

POSTED JUNE 2023

Summary of Group Meeting 1: Date: Monday, June 27, 2022

- The group was updated on changes to duration of service on committees/subcommittees/working groups from 3x2-year terms to 2x2-year terms.
- Discussion about the impact of COVID-19 on availability of allogeneic blood products and the effect on scheduling elective cardiovascular surgical procedures.
- Discussion about the "Global Definition of PBM" initiative and publication. This is an initiative led by SABM (Society of Advancement of Patient Blood Management) and NATA (Network for the Advancement of PBM, Hemostasis, and Thrombosis) and endorsed by numerous professional organizations SCA. The manuscript was published in A&A in the PBM special issue.
- Updates on the Management of Preoperative Anemia project:

The project is led by Drs. Nadia Hensley and Jacob Raphael and is a collaboration with the ERACS committee. We are also seeking endorsement from SABM for all sections.

Section # 1: Preoperative Anemia in Cardiac Surgery Patients - Definition and Clinical Outcomes.

This section is in manuscript preparation stage. It will be ready for submission to A&A by end of May 2023.

Section leaders: Prakash Patel (Yale); Nadia Hensley (Hopkins)

- Epidemiology of anemia in the cardiac surgery population.
- risk factor for preoperative anemia
- Are current definitions of preop anemia relevant to cardiac surgery patients?
- Effects of preop anemia on blood utilization and postop outcomes

Section #2: Implementation of a preop anemia clinic/service pathway in cardiac surgery.

This section is being written and prepared for submission. Plan is to submit to A&A by July 1, 2023.

Section leaders: Alan Klompas (Mayo), Matt Warner (Mayo), Seth Perelman (NYU)

- Discuss rationale of preoperative anemia clinic
- Overall structure /logistics/resource needed for preoperative anemia clinic
- Challenges in starting a preoperative clinic
- What are the alternatives (if at all) to a preoperative anemia clinic?

Section #3: Return of investment.

This section is complete, and the manuscript was submitted to A&A and is currently being revised based on the reviewers' comments. Plan is to resubmit by end of May 2023. In addition to SCA the manuscript is endorsed by SABM.

Section leaders: Nicole Guinn (Duke); Matt Warner (Mayo).

- Discusses how to minimize cost while maximizing benefits of preop anemia management clinical service/clinic
- Educational Podcasts: This is a collaboration with the CME committee on creating educational podcasts for SCA members. The first podcast discussing the SCA survey on practices of PBM and challenges in implementation of institutional PBM programs has been recorded and uploaded on the SCA website. Speakers: Ravi Joshi (UTSW) and Nadia Hensley (Hopkins); Moderator: Jenny Kwak (Loyola).
- Special A&A issue on PBM (September 2022): In September 2022 A&A has published a special issue on PBM. There has been a total of ~20 manuscripts that have been published in this issue. Many current and previous members of the subcommittee (Hensley, Mazzeffi, Raphael, Patel, Mazer, Shore Lesserson) contributed to this issue and were congratulated.
- Members have been updated on a funding opportunity for doing STS database-based trials on outcomes in cardiac surgery via the Participant User File (PUF) program. Several SCA members (Raphael, Mazzeffi, Kertai) have used this program in the past (with generous funding coming from the SCA foundation) and members were encouraged to use this opportunity for development of PBM-related outcome research based on the data coming from the STS database

COLLABORATION

- The sub-committee has a collaboration with the ERACS committee working on the pre-operative anemia management clinical practice advisory.
- The sub-committee has a collaboration with Dr. Jennifer Hargrave and the CME committee on the development of a series of podcasts related to PBM. The first podcast was recorded in July 2022 and uploaded to the website.

FUTURE PROJECTS

- The Sub-Committee is collaborating with Dr. Jennifer Hargrave and the CME committee on developing a series of podcast on patient blood management-related topics. The goal is to have a quarterly podcast presented/moderated by expert/s in PBM and uploaded to the SCA video library. The first podcast was recorded in July 2022. Future podcasts will address topics related to visco-elastic hemostasis testing in cardiac surgery; Do we need perioperative PLT function analysis? Tracking blood utilization as a metric of quality improvement, Preoperative anemia management
- Developing and writing an advisory on use of POC testing in the cardiac OR

- Developing and writing an advisory on the management of patients on DOACS and /or anti-PLT medications who present for cardiac Surgery. This is especially relevant in the context of patients receiving anti Xa inhibitors who present for urgent/emergent cardiac surgery
- The subcommittee has developed an educational module related to hemostasis and PBM to assist SCA members in preparation to the ACTA certification examination
- A survey on HIT and alternative anti-coagulation strategies for patients requiring CPB or MCS is being developed by Dr. Ian Welsby from Duke Univ. and will be open to interested committee members for participation
- A discussion with Drs. Ravi Joshi and Philip Greulich (both from UTSW) about reopening and repeating the PBM practices survey to evaluate any practice changes or practice gaps after the publication of the updated SCA/STS/SABM/AmSECT blood conservation guidelines.

The Subcommittee would like to thank Drs. Wanda Popescu, Bruce Bollen, Ken Tanaka, the SCA Board and Dr. Andrew Shaw for their continued excellent support.

POSTED NOVEMBER 2022

Summary of Group Meeting 1: Date: Monday, June 27, 2022

Summary of Discussion:

- The group was updated on changes to duration of service on committees/subcommittees/working groups from 3x2-year terms to 2x2-year terms.
- Discussion about the impact of COVID-19 on availability of allogeneic blood products and the effect on scheduling elective cardiovascular surgical procedures. Hopefully we see the light at the end of the tunnel.
- Discussion about the “Global Definition of PBM” initiative and publication. This is an initiative led by SABM (Society of Advancement of Patient Blood Management) and NATA (Network for the Advancement of PBM, Hemostasis, and Thrombosis) and endorsed by numerous professional organizations including ASA and SCA. The manuscript was published in A&A in the PBM special issue.
- Updates on the Management of Preoperative Anemia project:

The project is led by Dr. Renata Ferreira and is a collaboration with the ERACS committee.

Section # 1: Preoperative Anemia in Cardiac Surgery Patients - Definition and Clinical Outcomes. This section is in advanced stages of manuscript preparation and hopefully will be ready for submission for publication in 2-3 months.

- Epidemiology of anemia in the cardiac surgery population.
- risk factor for preoperative anemia
- Are current definitions of preop anemia relevant to cardiac surgery patients?
- Effects of preop anemia on blood utilization and postop outcomes
- section leaders: Prakash Patel (Yale); Nadia Hensley (Hopkins)

Section #2: Implementation of a preop anemia clinic/service pathway in cardiac surgery. This section is still under work and data collection. The involved members have started to prepare the manuscript.

- Discuss rationale of preoperative anemia clinic
- Overall structure /logistics/resource needed for preoperative anemia clinic
- Challenges in starting a preoperative clinic
- What are the alternatives (if at all) to a preoperative anemia clinic?
- Section leaders: Alan Klompas (Mayo), Seth Perelman (NYU)

Section #3: Return of investment. The manuscript of this section is undergoing final proof reading and will be ready for submission for publication within a few weeks.

- Discusses how to minimize cost while maximizing benefits of preop anemia management clinical

service/clinic

- Section leaders: Nicole Guinn (Duke); Matt Warner (Mayo).
- Educational Podcasts: This is a collaboration with the CME committee on creating educational podcasts For SCA members. The first podcast discussing the SCA survey on practices of PBM and challenges in implementation of institutional PBM programs has been recorded. Speakers: Ravi Joshi (UTSW) and Nadia Hensley (Hopkins); Moderator: Jenny Kwak (Loyola). There was a discussion about the possibility of providing learners with CME credits for these podcasts and on potential topics for future podcasts.
- Special A&A issue on PBM (September 2022): In September 2022 A&A has published a special issue on PBM. There has been a total of ~20 manuscripts that have been published in this issue. Many current and previous members of the subcommittee (Hensley, Mazzeffi, Raphael, Patel, Mazer, Shore Lesserson) contributed to this issue and were congratulated.
- Members have been updated on a funding opportunity for doing STS database-based trials on outcomes in cardiac surgery via the Participant User File (PUF) program. Several SCA members (Raphael, Mazzeffi, Kertai) have used this program in the past (with generous funding coming from the SCA foundation) and members were encouraged to use this opportunity for development of PBM-related outcome research based on the data coming from the STS database.

COLLABORATION

- The sub-committee has a collaboration with the ERACS committee working on the pre-operative anemia management clinical practice advisory.
- The sub-committee has a collaboration with Dr. Jennifer Hargrave and the CME committee on the development of a series of podcasts related to PBM. The first podcast was recorded in July 2022.

FUTURE PROJECTS

- The Sub-Committee is collaborating with Dr. Jennifer Hargrave and the CME committee on developing a series of podcast on patient blood management-related topics. The goal is to have a quarterly podcast presented/moderated by expert/s in PBM and uploaded to the SCA video library. The first podcast was recorded in July 2022. Future podcasts will address topics related to visco-elastic hemostasis testing in cardiac surgery; Do we need perioperative PLT function analysis? Tracking blood utilization as a metric of quality improvement, Preoperative anemia management.
- Developing and writing an advisory on use of POC testing in the cardiac OR.
- Developing and writing an advisory on the management of patients on DOACS who present for cardiac Surgery.
- The subcommittee is developing educational material related to PBM to assist SCA members in preparation to the ACTA certification examination. The Subcommittee would like to thank Drs. Wanda Popescu, Bruce Bollen, Ken Tanaka, the SCA Board and Dr. Andrew Shaw for their continued excellent support.

POSTED JUNE 2022

Summary of Group Meeting on Wednesday, May 19, 2021

- During the meeting with the members of the group, we presented past initiatives of the blood management CPI subcommittee. We specifically discussed the CPI clinical advisory and ways to improve it's availability and dissemination to SCA members and other care providers.
- Discussion about the impact of COVID-19 on availability of allogeneic blood products and the effect on scheduling elective cardiovascular surgical procedures
- The group was updated on current projects, especially on the preoperative management of anemia advisories (led by Dr. Renata Ferreira, Dr. Nadia Hensley and Dr. Mike Grant) and the collaboration developed with the ERACS committee on this topic. This project is aimed to develop a statement/s on best practices for preoperative anemia optimization, including strategies, team building, and infrastructure. Dr. Ferreira noted the three advisories of the project.
Advisory #1 Anemia in Cardiac Patients – Definition and Issues – there has been a significant progress with this advisory and it will be ready for submission for publication within 4-6 weeks
Advisory #2 Implementation of a Preoperative Anemia Clinic or Pathway

Advisory #3 Return of Investment on Preoperative Anemia Clinics or Pathways in Cardiac Surgery – a significant progress was made with this advisory and it will be ready for submission for publication within the next 4-6 weeks

Current and new members were encouraged to participate and apply assigned roles.

- The publication of the “Blood Conservation and Hemostasis in Cardiac Surgery: A Survey of Practice Variation and Adoption of Evidence-Based Guidelines,” was discussed and the lead author, Dr. Joshi, presented its main results. The committee also discussed using the survey as a future tool to document the impact of guidelines and other advisories that the sub-committee is developing/advocating for.

DESCRIPTION & GOALS

- The sub-committee has reviewed and recommended the guidelines committee and the BOD to endorse the “global definition of PBM” document. This is a document that was developed and written by SAPBM (the society of advancement of patient blood management) and received wide endorsement by the ASA and numerous national and international organizations and professional societies. The paper has been accepted for publication by A&A and SCA’s endorsement

COLLABORATION

- The sub-committee has a collaboration with the ERACS committee working on the pre-operative anemia management advisory.
- The sub-committee has started a collaboration with Dr. Jennifer Hargrave and the CME committee on the development of a series of podcasts related to PBM (see below).

FUTURE PROJECTS

- The Sub-Committee (led by Drs. Ravi Joshi, Nicklesh Patel and Nadia Hensley) is collaborating with Dr. Jennifer Hargrave and the CME committee on developing a series of podcast on patient blood management-related topics (such as but not limited to VE POC testing and adoption of transfusion algorithms, management of preoperative anemia, review of transfusion practices and knowledge gaps for adoption of clinical best practices, etc.), The goal is to have a quarterly podcast resented/moderated by expert/s in PBM and uploaded to the SCA video library. The goal is to have the first Podcast ready by the 3rd week of June 2022.
- Developing and writing and advisory on use of POC testing in the cardiac OR

The Subcommittee would like to thank Drs. Wanda Popescu, Bruce Bollen, Ken Tanaka, the SCA Board and Dr. Andrew Shaw for the continued excellent support.

POSTED OCTOBER 2021

Summary of Group Meeting 1: Date: Wednesday, May 19, 2021

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Advisory #1 Anemia in Cardiac Patients – Definition and Issues

Advisory #2 Implementation of a Preoperative Anemia Clinic or Pathway

Advisory #3 Return of Investment on Preoperative Anemia Clinics or Pathways in Cardiac Surgery

Current and new members were encouraged to participate and apply assigned roles.

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COLLABORATION

- The sub-committee has a collaboration with the ERACS committee working on the pre-operative anemia management advisory

FUTURE PROJECTS

- Developing and writing and advisory on use of POC testing in the cardiac OR
- The Sub-Committee is looking into developing a podcast that will be a part of this year’s SCA online educational material. The podcast will focus on the recently published update of the SCA/STS PBM guidelines. There should be a specific emphasis on “what is new” in these guidelines compared to the previous 2011 edition.

POSTED JUNE 2021

The major future projects of the Blood Management Sub-Committee are:

1. Optimization of pre-operative anemia (how to develop/setup preoperative anemia service; what are the current recommendations/guidelines for best practices in management of preoperative anemia).
2. Clinical practice advisory on point of care coagulation devices (specifically VE testing and PLT function POC testing).
3. Developing a webinar that looks at survey as a quality assessment tool and summarizes the major findings of the PBM survey that was accepted for publication recently.
4. Serial membership surveys to follow and assess adoption of new PBM guidelines.
5. Developing a mechanism for committee generated PUFs for PBM-related research using STS data.