The SOAP leadership will be formally reexamining our mission and goals this spring for the first time in almost a decade. On April 22, we will convene in Chicago for a moderated, eight-hour session strategic planning session. The board felt that it would be best to conduct this exercise independent from other meetings to be fully engaged and free from distractions. Bruce Withrow, an independent and experienced professional organization strategist, will moderate the session. Board members and some select others have been asked to participate to represent key missions, and diversify our perspective. The SOAP board is not surprisingly comprised of almost entirely mid-career academic obstetric anesthesiologists, and having representation from anesthesiologists in community practice and early in their careers seems vital. Surveys will be conducted in advance of the session to frame the issues SOAP faces and prioritize them for discussion. We expect the deliberations to be comprehensive and the subjects of governance, educational platforms, research support, membership growth, and inter-organizational collaborations to be broad areas of discussion. I will elaborate briefly on some background and issues within these topics.

**Governance:**
A functional organizational structure is in place to manage SOAP, but it almost certainly could be reexamined to optimize performance. For a relatively small organization, SOAP has a large board, seventeen committees, and numerous subcommittees and task forces. This is almost certainly a good measure of our members’ enthusiasm to participate in the organization, but some have argued that this structure would be best streamlined. The length of our presidency term has been identified relatively short compared with peer organizations, and it’s possible that this structure limits the effectiveness of...
the office, particularly with regards to implementing change. However, expanding the length of the president term would come at the cost of reduced opportunity for some SOAP members to become leaders.

**Educational Platforms:**

SOAP has primarily reached practitioners through our annual meeting, the Sol Shneider refresher course meeting, and other limited venues. Expanding our offering of regional meetings represents a challenge in the current Continuing Medical Education landscape. We presented an inaugural east coast refresher meeting last fall, but it is unclear at this point how we will approach that and plans for other regional meetings in the future. SOAP invests substantial resources in translating our annual meeting, supporting global projects, and providing some educational content for free in the public domain. We have felt that these were important extensions of the SOAP mission but we whether they remain aligned with SOAP’s core mission and justify the resource allocations going forward. A new activity that appears to be an early success is the Obstetric Anesthesia Self-Assessment Module offered jointly with the ASA ([http://www.asahq.org/shop-asa/detail?productId=3468337](http://www.asahq.org/shop-asa/detail?productId=3468337)). This program spearheaded by Bob Gaiser and created by a cadre of SOAP members provides an opportunity for anesthesiologists to keep updated on obstetric anesthesia topics and provides revenue for the society.

**Research:**

We are proud that SOAP is one of the premier venues in the world for sharing new investigative results in obstetric anesthesia. In recent years we have attempted to balance growth in presentations at our annual meeting with the maintenance of high standards for quality. Last year’s experimentation with an electronic format for poster presentation in Boston perhaps highlights some of the challenges. We felt that it was time to transition to a more modern presentation format but our first foray into that realm resulted in some compromise in the educational experience. We will continue to refine our presentation format going forward with the principal goal of optimal dissemination of information.

With regards to the support of research, SOAP has expanded grant offerings to individual members in recent years and we continue to explore how much support is appropriate and sustainable for a small organization. Looking more broadly at scientific investigation in our community, a great deal of important research is being conducted at numerous centers but we have thus far been unable to scale our endeavors into a coordinated clinical research network. We are exploring mechanisms by which SOAP could organize and catalyze such a network that could address important questions in our field more rapidly and with more generalizable results.

**Membership & Growth:**

It may be an opportune time for SOAP to reconsider how we approach membership and the size of our organization, specifically if our goal is to grow and reach a broader audience. At the forefront of this subject is developing more effective communication to trainees that presents obstetric anesthesia as a professionally fulfilling subspecialty. With regard to active practitioners, we certainly have an engaged academic audience, but we are lagging in our ability to reach community practitioners and generalist anesthesiologists who provide the majority of obstetric anesthesia care in North America. And we certainly cannot overlook the role we should play in the international community. If our society truly has the goal of substantially reducing maternal mortality, then our international engagement should be a greater part of our mission. Overall, we would like SOAP to be identified as the highest quality source of information about obstetric anesthesia, but also one that is a highly-regarded voice addressing the safety and quality of obstetric outcomes.

**Inter-Organizational Collaboration:**

Perhaps the area where our mission has expanded most dramatically in the last five years has been in more formal interactions with other societies, including the American College of Obstetricians and Gynecologists, the Society for Maternal-Fetal Medicine, and state-based maternal quality care collaboratives. SOAP’s participation in these multidisciplinary working groups have led to the development of joint guidelines, and other meaningful work products. We feel that this will clearly be an important part of SOAP’s future, but it has also raised questions about our standards for guideline endorsement, and value in promulgating independent SOAP position statements.

In summary, I look forward to working with our board to create the next strategic plan for SOAP. We have structured a process that will optimize thoughtful planning for the future of this organization that we care about so deeply. As a SOAP member, I welcome your input into this process. Feel free to contact me directly by email (sullivan@northwestern.edu) using the subject line “SOAP Strategic Plan.”
This Spring Newsletter focuses on the theme of the upcoming 49th Annual SOAP Meeting, “Beyond the Obstetric Suite”, which will be held in Bellevue, Washington from May 10-14th. In this issue, our authors provide articles in line with the conference theme. Dr. Sullivan discusses SOAP’s plan to evaluate its strategic mission both locally and globally. Dr. Ronald George from the Media Committee discusses plans to delve into the role of social media in your professional life at the annual meeting and encourages all members to #gettingsocial. Drs. Clinton and Minehart discuss the very important role of simulation training for not only technical skills, but communication training and team functioning during challenging scenarios that may occur outside the confines of the obstetric suite. Likewise, Dr. Padilla discusses the role of the obstetric anesthesiologist in maternal ICU care.

This issue also includes annual meeting event schedules and timelines to help you plan as well as an introduction to the meeting’s educational events by the Scientific Program Chair, Dr. Brendan Carvalho.

We hope you enjoy this issue and look forward to seeing you in Bellevue!
On behalf of the SOAP Board of Directors and the SOAP 2017 Annual Meeting Program Committee, I would like to invite you to SOAP 2017 in Bellevue, Washington May 10-14th, 2017, and highlight the many educational offerings the 49th SOAP Annual Meeting will present to attendees. The theme of this year’s meeting is “Beyond the Obstetric Suite” to reflect physician anesthesiologists’ expanding roles and growing scope of practice. The lectures and workshops at this year’s meeting will deliver the highest quality educational and scientific material that will appeal to both academics and private practice anesthesiologist.

The Gertie Marx/FAER lecture will be given by our keynote speaker, Ansgar M. Brambrink, Professor and Chair at Columbia University, who will cover aspects of fetal neurotoxicity relevant to obstetric anesthesiologists. The plenary lecture will be given by Jerker Liljestrand from the Bill and Melinda Gates Foundation. His lecture entitled “Is birth becoming safer in the world - and what can we do?” promises to be both enlightening and thought provoking. I am delighted that this year’s Gerard W. Ostheimer Lecture: What’s New in Obstetric Anesthesia? lecture will be given by Brian Bateman, Associate Professor at Harvard Medical School. We are also honored to have Cynthia Wong, Professor and Chair at University of Iowa to give this year’s prestigious Fred Hehre Lecture.

For the first time at SOAP, we are excited to host a Chinese Symposium on Obstetric Anesthesia on Wednesday, May 10, 2017. Lectures at this symposium, along with other key lectures during the annual meeting, will be simultaneously translated to and from Mandarin.

We will offer four high-quality workshops covering many clinical needs and interests, including: a Patient Safety Workshop: Leading Systems Change (Course Directors: Unyime Ituk and Jennifer Banayan); Ultrasound in Obstetric Anesthesia: Vascular Access, Neuraxial Anesthesia, TAP Block and Gastric Assessment Workshop (Course Director: Jose C.A. Carvalho); Focused Cardiac Ultrasound in the Management of the High Risk Parturient Workshop (Course Director: Laurie A. Chalifoux); and Becoming a Successful Obstetric Anesthesiology Leader Workshop (Course Director: Grant C. Lynde).

For the main conference, international experts Carolyn Weiniger (Israel), Cristian Arzola (Canada), Jose C.A. Carvalho (Canada) and Robert A. Dyer (South Africa) will teach us about using gastric, neuraxial and transthoracic ultrasound. The Research Hour will discuss changes in drug exposure during pregnancy. Steve Shafer, Professor and Pamela Flood, Professor at Stanford University School of Medicine will review pharmacokinetic principles relevant to our practice. Mary F. Hebert, Professor at University of Washington will provide a plenary lecture on pharmacokinetic changes that affect the continuum of pregnancy and lactation. Mohamed Tiouririne, Ashraf S. Habib, Eric J. Hunt, Ruth Landau, and Pervez Sultan will discuss Enhanced Recovery after Cesarean Delivery protocols for the management of perioperative pain, temperature management, and nausea and vomiting. An obstetric hemorrhage management panel will feature John T. Sullivan, Professor at Northwestern University, and Jonathan H. Waters, Professor at University of Pittsburgh School of Medicine, who will discuss controversies surrounding ratio-driven transfusion practice and antifibrinolytic therapy for obstetric hemorrhage management.

Heather Nixon, Associate Professor at the University of Illinois at Chicago will lead a panel of experts in social media (Larry Chu and Edward Mariano - Professors at Stanford University School of Medicine, and Ronald George, Associate Professor at Dalhousie University) who will review online platforms and the importance of social media to enhance education, professional development and patient engagement.

Our pro/con debate will feature Roshan Fernando, President of OAA and Kenneth E. Nelson, Associate Professor at Wake Forest University arguing for and against switching from continuous epidural infusions to programmed intermittent epidural boluses for labor epidural analgesia maintenance.

On Sunday May 14th, Katherine W. Arendt will moderate a distinguished panel of experts, Lisa R. Leffert, Barbara M. Scavone and Lawrence C. Tsen, to discuss interesting case reports submitted to the meeting. There is also a not to be missed session on Ethical Dilemmas in Obstetric Anesthesia moderated by Laurent A. Bollag, with panelists Caitlin D. Sutton, Paloma Toledo, and Robert R. Gaiser.
Keeping with tradition, best research abstracts will be presented in the Gertie Marx Research Competition, Best Paper Session, and Oral Presentation Session. For poster presentations, a hybrid model will be used incorporating paper and electronic posters.

Online blog discussion boards and social media (#SOAPAM2017 hashtag on Twitter) will allow attendees to exchange opinions on abstracts presented at SOAP. If you are new to Twitter, make sure you see one of our conference social media ambassadors during the meeting who can help you set up an account. There will be a $100 gift certificate for the attendee who generates the most SOAP2017-related tweets during the meeting.

The Hyatt Regency Bellevue provides first-class facilities for this year’s meeting. Bellevue is only 10 miles from downtown Seattle, and shuttles will provide easy access for those wanting to explore. Plus, there will be a fun-filled social program as described in the last SOAP newsletter by Alex Butwick.

I look forward to seeing you in Bellevue, Washington May 10-14th, 2017!
I am pleased to present this Treasurer’s report for our society, reflecting our financial status as of the end of 2016. Similar to the modest performance in 2015, we finished the year with a small positive margin. Our results were driven by a strong annual meeting, a small positive margin on the Sol Shnider meeting, a significant loss on the inaugural East Coast Meeting, and some new membership benefits including new journal subscriptions.

SOAP’s revenue comes principally from three sources: annual dues, Sol Shnider meeting registration fees, and Annual Meeting fees. By far our largest line item is the Annual meeting. As shown in Figure 1, our Boston meeting showed an outstanding positive margin of approximately $177,000, on par with the banner years of 2013 and 2014. This was more than twice what was budgeted and was driven by very robust attendance (and therefore over $100,000 more revenue than budgeted), combined with expenses only slightly above budget.

Membership was slightly (4%) under budget, but a significant rebound from 2015.

The Sol Shnider meeting was marginally profitable, at approximately $12,000 positive margin. Income was ahead of budget, due to strong attendance. But expenses exceeded budget significantly, driven largely by food and beverage costs. The Board has worked on tightening up the contract for this year and the future. Figure 2 shows the Shnider meeting performance over the last several years.

In November, we debuted the East Coast Meeting in Washington, DC. From a financial perspective, this endeavor was unsuccessful, netting a nearly $70,000 loss. Attendance was far less than expected, and thus registration income was only about half what was budgeted. The Society incurred a fee for not filling the projected room block, which increased expenses substantially over budget. The Board has elected not to hold this meeting in 2017, pending discussion of the broader strategic plan.

Overall, the society finished the year just over breakeven, with a margin of $7000. This compares to the unusually profitable years of 2013 and 2014, when the society earned over $150,000 per year (Figure 3), but approximately the same as last year. A long-postponed dues increase and careful attention to expenses will likely result in better performance in 2017.

SOAP’s assets are now recorded in two separate accounting systems, one for the endowment funds, and one for our operating accounts. As of the end of December 2016, the Society had $1,972,194 in endowment assets and $1,046,450 in operating fund assets. These totals have increased since the beginning of the year, reflecting the market’s latest rally. We have simultaneously increased research grant funding and other SOAP missions. The Society has managed its expenses well and enjoyed strong performance from its two established meetings, and has thus turned in an admirable performance, meeting budget for the year despite the setback of the East Coast meeting. Thus, while we did not perform at the level of a few recent years, we nonetheless continue to enjoy a strong financial status as a Society.
Figure 1

**Annual meeting results update**

![Graph showing annual meeting results update](image1)

Figure 2

**Sol Shnider results**

![Graph showing Sol Shnider results](image2)

Figure 3

**Overall SOAP financial results**

![Graph showing overall SOAP financial results](image3)
Wednesday, May 10, 2017

7:30 a.m. - 6:00 p.m.  
Registration Hours

8:00 a.m. - 12:00 p.m.  
Patient Safety Workshop: Leading Systems Change  
Course Directors: Unyime Ituk, M.B., B.S.; Jennifer Banayan, M.D.

8:00 a.m. - 12:00 p.m.  
The Use of Ultrasound in Obstetric Anesthesia: Vascular Access, Neuraxial Anesthesia, TAP Block and Gastric Assessment Workshop  
Course Director: Jose C.A. Carvalho, M.D., Ph.D., FANZCA, FRCPC

1:00 p.m. - 5:00 p.m.  
Applications of Focused Cardiac Ultrasound in the Management of the High Risk Parturient Workshop  
Course Director: Laurie A. Chalifoux, M.D.

1:00 p.m. - 5:00 p.m.  
Chinese Symposium on Obstetric Anesthesia  
Presenters: Jun Ma, M.D.; Xiaofeng Shen, M.D.; Cynthia A. Wong, M.D.; Mingjun Xu, M.D.; Haiya Yan, M.D.; Shanglong Yao, MD

6:00 p.m. - 8:00 p.m.  
Welcome Reception

Thursday, May 11, 2017

6:30 a.m. - 3:30 p.m.  
Registration Hours

6:30 a.m. - 7:45 a.m.  
Continental Breakfast & View Posters - Exhibits Open

7:45 a.m. - 8:00 a.m.  
Welcome to the 49th Annual Meeting  

8:00 a.m. - 9:30 a.m.  
Gertie Marx Research Competition  
Moderator: Richard M. Smiley, M.D., Ph.D.

8:00 a.m. - 12:00 p.m.  
Patient Safety Workshop: Leading Systems Change  
Course Directors: Unyime Ituk, M.B., B.S.; Jennifer Banayan, M.D.

8:00 a.m. - 12:00 p.m.  
The Use of Ultrasound in Obstetric Anesthesia: Vascular Access, Neuraxial Anesthesia, TAP Block and Gastric Assessment Workshop  
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Presenters: Jun Ma, M.D.; Xiaofeng Shen, M.D.; Cynthia A. Wong, M.D.; Mingjun Xu, M.D.; Haiya Yan, M.D.; Shanglong Yao, MD

6:00 p.m. - 8:00 p.m.  
Welcome Reception

Friday, May 12, 2017

6:30 a.m. - 5:00 p.m.  
Registration Hours

6:30 a.m. - 8:00 a.m.  
Continental Breakfast & View Posters - Exhibits Open

7:45 a.m. - 7:45 a.m.  
5K Fun Run/Walk

Program Schedule continued on next page
# Program Schedule

## Saturday, May 13, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 a.m. - 5:00 p.m.</td>
<td>Registration Hours</td>
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<tr>
<td>7:00 a.m. - 8:30 a.m.</td>
<td>Continental Breakfast &amp; View Posters</td>
</tr>
<tr>
<td>7:40 a.m. - 7:45 a.m.</td>
<td>Opening Remarks&lt;br&gt;<strong>Brendan Carvalho</strong>, M.B.B.Ch., F.R.C.A., M.D.C.H.</td>
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<tr>
<td>7:45 a.m. - 9:15 a.m.</td>
<td>Oral Presentations&lt;br&gt;<strong>Moderator:</strong> Philip E. Hess, M.D.</td>
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<tr>
<td>9:15 a.m. - 9:30 a.m.</td>
<td>Awards Presentations</td>
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<tr>
<td>9:30 a.m. - 10:00 a.m.</td>
<td>Coffee Break &amp; Poster Viewing</td>
</tr>
<tr>
<td>10:00 a.m. - 11:00 a.m.</td>
<td>Is Birth Becoming Safer in the World - and What Can We Do?&lt;br&gt;<strong>Introduction:</strong> Edward T. Riley, M.D.&lt;br&gt;<strong>Speaker:</strong> Jerker Liljestrand, M.D., Ph.D.</td>
</tr>
<tr>
<td>11:00 a.m. - 12:00 p.m.</td>
<td>Gerard W. Ostheimer Lecture&lt;br&gt;**What’s New in Obstetric Anesthesia?&lt;br&gt;<strong>Introduction:</strong> Philip E. Hess, M.D.&lt;br&gt;<strong>Speaker:</strong> Brian T. Bateman, M.D., M.Sc.</td>
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<tr>
<td>12:00 p.m. - 1:00 p.m.</td>
<td>Lunch On Your Own &amp; Poster Viewing</td>
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## Sunday, May 14, 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:30 a.m. - 11:30 a.m.</td>
<td>Registration Hours</td>
</tr>
<tr>
<td>6:30 a.m. - 8:00 a.m.</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>7:40 a.m. - 7:45 a.m.</td>
<td>Opening Remarks&lt;br&gt;<strong>Brendan Carvalho</strong>, M.B.B.Ch., F.R.C.A., M.D.C.H.</td>
</tr>
<tr>
<td>7:45 a.m. - 9:15 a.m.</td>
<td>Best Case Report Panel - Case Report Review with the Experts&lt;br&gt;<strong>Moderator:</strong> Katherine W. Arendt, M.D.&lt;br&gt;<strong>Panelists:</strong> Lisa R. Leffert, M.D.; Barbara M. Scavone, M.D.; Lawrence C. Tsen, M.D.</td>
</tr>
<tr>
<td>9:15 a.m. - 10:15 a.m.</td>
<td>Ethical Dilemmas in Obstetric Anesthesia&lt;br&gt;<strong>Moderator:</strong> Laurent A. Bollag, M.D.&lt;br&gt;<strong>Speakers:</strong> Robert R. Gaiser, M.D.; Caitlin D. Sutton, M.D.; Paloma Toledo, M.D., M.P.H.</td>
</tr>
<tr>
<td>10:15 a.m. - 10:30 a.m.</td>
<td>Final Awards Presentations and Closing Remarks&lt;br&gt;<strong>Brendan Carvalho</strong>, M.B.B.Ch., F.R.C.A., M.D.C.H.</td>
</tr>
<tr>
<td>10:30 a.m. - 11:30 a.m.</td>
<td>Poster Session 4&lt;br&gt;<strong>Moderators:</strong> Terrence K. Allen, M.B., B.S.; Brenda A. Bucklin, M.D.; Robert D’Angelo, M.D.; Michael A. Froelich, M.D., M.S.; Lisa R. Leffert, M.D.; Robert S. McKay, M.D.; Christine P. McKenzie, M.D.; Jill M. Mhyre, M.D.; Stephen Pratt, M.D.; Mark I. Zakowski, M.D.</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>Adjournment</td>
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The SOAP Annual Meeting is just around the corner. It promises to be another educational meeting, with the opportunity to immerse ourselves in emerging research and innovation in obstetric anesthesiology as well as catch up with old friends. This year the conference focuses on “Beyond the Obstetric Suite” and the media committee is taking an active part in the education with more digital conference presence and education than ever.

Please check out the annual meeting website at http://soap2017.org or link to the site from the SOAP website.

It’s all about the #SocialMedia:

Whether you are in the #socialmedia elite or you don’t even know what @Twitter or @Facebook are all about, there are opportunities for everyone to learn about social media. [Twitter Glossary - @ indicates the username and # is a type of label or tag which makes it easier to search content]

Social media is a lot like the SOAP Annual Meeting - it’s all about conversations and the exchange of information. You can use social media to connect with colleagues, keep up to date on the latest research and even contribute to that knowledge base. In anesthesia, social media is being used for education, research, community engagement and advocacy.

Feel like a social media neophyte? - that’s cool - there will be #SOAPAM2017 social media ambassadors at the registration desk and throughout the meeting to help get you started and answer questions. Don’t know what twitter is - no worries - we can help you get started - think of our social media ambassadors as your twitter mentors - or “twentors”. The easiest place to get started is to download the @twitter app to your phone or iPad or simply log onto www.twitter.com from your laptop and create an account before the annual meeting.

For those of you already familiar with Twitter, follow @SOAPHQ on Twitter for meeting updates and events and don’t forget to tweet the educational events you attend with the hashtag #SOAPAM2017. Whether you are a conference attendee or following remotely, Twitter feeds are great opportunities to expand our social cohort and this year we want to help you engage with other members of SOAP.

The @SOAPHQ annual meeting (#SOAPAM2017) is your opportunity to embrace social media or just dip your toes in the water. There are many levels of participation at #SOAPAM2017.

Level 1 - @SOAPHQ will be sending Facebook and Twitter updates as the meeting progresses, a great means of keeping in touch with the meeting schedule, social events and meet-ups.

Level 2 - utilize social media to follow your friends or various @SOAPHQ experts to gauge their thoughts on some of the topics of discussion. Most people on social media only “listen” - you could be a #SOAPAM2017 voyeur. See what others are saying about the sessions.

Level 3 - share your thoughts and opinions, interact with colleagues, discuss hot topics from the meeting. There is something for everyone. Share links to associated paper or literature.

On May 12th, at the SOAP meeting, we are hosting a “Getting Social” panel, featuring Ronald George (@Ron_George), Ed Mariano (@EMarianoMD) and Larry Chu (@LarryChu) and moderated by Heather Nixon (@hnixon147). This panel targets the novice to the expert by covering the basics of social media, uses in obstetric anesthesiology (#OBAnes) all the way to enhanced engagement, networking for the anesthesiologist and educational applications.

As a primer for this session, check out Ed Mariano’s post “Why all Doctors should be on twitter” (https://www.asra.com/news/101/why-all-doctors-should-be-on-twitter#.V5PvegqH1y4.twitter). Starting to get more curious about social media? You can visit @Ron_George posts on @Medium where he shares some insight into his use of social media.

While you wait in anticipation for the 2017 SOAP Annual Meeting consider exploring Twitter (Twitter.com), maybe create a profile and send your #FirstTweet. If you have any questions about the social media content at #SOAPAM2017 don’t hesitate to contact @Ron_George (rbgeorge@dal.ca) or @hnixon147.
Simulation has been used in the field of healthcare to educate and evaluate providers, both individually and in teams. Over the past 10 years simulation continues to evolve, increasingly applied in more complex contexts, with interprofessional groups and challenging patient situations. As trainees, we participated in numerous types of medical simulation from laparoscopic box trainers to complicated maternal crises using high-fidelity, in situ, immersive simulation. As attending physicians in obstetrics and obstetric anesthesia, we participated in simulation courses with colleagues and other care providers learning key management features of complicated maternal patients and team skills. Through the years, the majority of the focus of simulation has been on skill development and patient management. As the complexity of healthcare simulation has advanced, the challenges in creating high fidelity simulations have also become more apparent. Management of a complicated pregnant patient may not only be determined by the diagnosis, but also by the setting of care, the available providers and resources that are often unique to each clinical practice and location.

Healthcare simulation courses often reference similarities and lessons learned from flight simulation, but one of the key lessons we can learn is often overlooked. In 1984, a study examined the personalities and attitudes of flight captains and the first officers. Understanding that the pilots’ attitudes played a key role in crisis management, and that the different views of the captains and co-pilots could be used as a starting point for discussions and debriefings, was a profound breakthrough in aviation simulation. Similarly, these concepts have recently been explored in the healthcare setting. The various providers who deliver care to maternal patients approach crises based on their educational specialty, individual culture and even communicate differently. Each provider may have different patterns of communication; critical information may be incompletely communicated, interpreted or missed entirely. Communication plays a key role in medical crises. Effective management of maternal medical crisis may depend more on our ability to effectively communicate and coordinate than the skill levels of the individual providers. This concept has taken decades to saturate the culture in aviation; this article serves to make this concept more readily adopted by healthcare providers.

Despite our extensive education and training, and even with our focus on simulation, our ability to communicate and function as a team may be as important (if not more so) than merely the knowledge base and skills of the individual providers in determining the outcomes. The multidisciplinary team has been touted by multiple medical organizations. The influence of communication styles, as individuals and as sub-specialists may also affect the way we perceive what constitutes a crisis, has been an underappreciated aspect in support of interprofessional, collaborative simulation. Even in controlled environments, simulation has supported the idea that the roles and responsibilities of obstetricians, anesthesiologists and nurses are viewed differently by participants. If this occurs in our familiar environment like the delivery room suite, what happens when we leave the labor and delivery unit?

Administering care outside of the maternity unit can be even more complex. In crisis management, our abilities to communicate, create an action plan, and execute care by a coordinated team are hampered by separation in space, the absence of familiar (and trusted) care team members, the unknown location of critical medical supplies, and the introduction of countless pieces of background noise that creates a potentially overwhelming cognitive load on providers. Much of the personnel and systems that are readily available on the labor and delivery unit are suddenly, strikingly absent. Questions like, “Who do I call?”, “Where do we go?”, “How can I find it?”, and, “How do we get there?” suddenly rise to the forefront and add confusion, often without simple solutions or clear answers. These complicating questions can delay thinking about, “What do we need to do?” and may affect outcomes. Implementing off-unit simulation can aid in uncovering some of these questions and their answers. Developing a systematic way to help guide our simulations can help uncover the somewhat hidden pitfalls in coordinating care in these environments, and help us discover what it takes to deliver optimal in maternal crisis outside of the labor and delivery unit.

Education Committee continues on page 13
Implementing measures that impact patient safety on Labor and Delivery can be a challenge. However, Obstetric (OB) anesthesiologists are well positioned to help institute these safety initiatives both as internal quality improvement as well as system-wide multi-disciplinary practice improvement. The SOAP 2017 Patient Safety Workshop at the annual meeting will explore several ways OB Anesthesiologists can help lead system changes to ensure a culture of safety for obstetric patients. The following is one example of such an initiative.

Obstetric hemorrhage is a common and often preventable cause of maternal morbidity and mortality worldwide, is one of the top three causes of mortality and occurs in approximately 5% of all pregnancies.¹ In the United States, the rate of blood transfusion for maternal hemorrhage has tripled from 1998-2008.² The Joint Commission on the Accreditation of Healthcare Organizations has suggested using a protocol driven approach for obstetrical hemorrhage that reduces maternal morbidity and mortality.³ In addition, the SMFM/ACOG Maternal Safety Consensus Meeting in 2013 recommended readiness for every obstetrical unit by having immediate access to hemorrhage medications, a response team, transfusion protocols, unit-based drills and a hemorrhage cart.⁴,⁵ These mobile, secure and standardized carts stored in the L&D operating rooms as well as on the antepartum unit and are thus easily accessible from all areas of labor and delivery and serve to streamline timely treatment measures during acute maternal hemorrhage.

Jean Miles (Memorial Healthcare System):

Because maternal hemorrhage may occur during any phase of the peripartum period, we (Department of Anesthesiology) developed an Obstetric Hemorrhage Cart and Anesthesia Critical Care Cart which provide immediate access to supplies and medications that expedite treatment and resuscitation. In order to assure reliable supply availability, all contents of the carts are standardized. Standardization of cart contents incorporates an “exchange cart” process once the cart has been used. A patient sticker is placed on the attached inventory charge sheet that is located on the cart, and pharmacy and central supply departments charge and restock the needed cart supplies. Cart maintenance and cleaning occurs during the restocking process. In order to ensure the cart contents are secure, a breakaway plastic lock is placed on the outside of the cart. This device serves as a visual means to identify the status of cart usage and as a method to determine integrity of cart contents. A standardized exchange protocol also assists the pharmacy and central supply in monitoring expiration dates and inventory control. Additionally, the cart contains a laminated checklist to direct the cart exchange process.

The following is one private practice institution’s response to implementing a hemorrhage cart at their center.

Jean Miles (Memorial Healthcare System):

Because maternal hemorrhage may occur during any phase of the peripartum period, we (Department of Anesthesiology) developed an Obstetric Hemorrhage Cart and Anesthesia Critical Care Cart which provide immediate access to supplies and medications that expedite treatment and resuscitation. In order to assure reliable supply availability, all contents of the carts are standardized. Standardization of cart contents incorporates an “exchange cart” process once the cart has been used. A patient sticker is placed on the attached inventory charge sheet that is located on the cart, and pharmacy and central supply departments charge and restock the needed cart supplies. Cart maintenance and cleaning occurs during the restocking process. In order to ensure the cart contents are secure, a breakaway plastic lock is placed on the outside of the cart. This device serves as a visual means to identify the status of cart usage and as a method to determine integrity of cart contents. A standardized exchange protocol also assists the pharmacy and central supply in monitoring expiration dates and inventory control. Additionally, the cart contains a laminated checklist to direct the cart exchange process.

These mobile, secure and standardized carts stored in the L&D operating rooms as well as on the antepartum unit and are thus easily accessible from all areas of labor and delivery and serve to streamline timely treatment measures during acute maternal hemorrhage.

The specific shape (and contents) of a hemorrhage cart or box varies by institution. Several members of the SOAP Patient Safety Committee contributed photos of their carts (see next page). Table 1 depicts suggestions of items that could be included in the development of a new obstetric hemorrhage cart.

Patient Safety Committee continued on next page
Table 1. Example of Potential Hemorrhage Cart Contents*

<table>
<thead>
<tr>
<th>Category</th>
<th>Sample Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documents</strong></td>
<td>Peripartum hemorrhage protocol List of cart contents by drawer**</td>
</tr>
<tr>
<td><strong>Obstetric supplies</strong></td>
<td>Sterile speculum and gel Exam gloves, sleeve and gown Vaginal packing Chux pads and drapes Suture Red rubber catheter/ Foley catheter Bakri balloon</td>
</tr>
<tr>
<td><strong>Anesthesia supplies</strong></td>
<td>Venous access supplies (large bore catheters and central line kit) Arterial line set-up Laboratory tubes Syringes (including ABG) Blood tubing Pressure bags JV fluids (if room available)</td>
</tr>
<tr>
<td><strong>Medications</strong></td>
<td>Epinephrine Lidocaine Calcium chloride Oxytocin Misoprostol Methylergonovine/ Carboprost (if proper storage possible)</td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td>Scale</td>
</tr>
</tbody>
</table>

* Based on lists of cart contents provided by members of the SOAP Patient Safety Committee
** Cart contents should be regularly verified for specified par number and expiration dates

References


Creating focus groups addressing the attitudes and priorities of the healthcare team members during crisis simulations will benefit all parties involved. We can design educational simulation encounters that help uncover other systems-based errors. Individual and sub-specialty communication biases can be particularly important when transporting a patient between labor and delivery and remote areas. Transport often involves special equipment or monitors, using elevators and emergency access, or even moving between buildings. An effective debriefing at the end of one such simulation can help individual providers understand the challenges and mental frameworks of the other members of the care team; identification of discrepancies will help guide creating effective strategies, use of technologies, and be a trigger for policy updates and implementation. As we expand our healthcare simulation programs, it is critical that we use include aspects of individual communication biases and off-unit drills - to ensure safe teamwork practices and responses to crises for all of our pregnant patients.

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Dadiz et al., 2013; Fan et al., 2005; “full-text,” n.d.; Minehart et al., 2012; Posner et al., 2014)
In current obstetric anesthesia practice, a more complex patient demographic is the new normal, forcing obstetric anesthesiologists to re-evaluate the way we deliver care; much like the founders of SOAP faced when anesthesia-related events contributed significantly to maternal mortality and most hospitals in the United States did not offer 24 hour anesthesiology coverage.1 Clearly, there was a dire need for change and physicians from different subspecialties convened in 1968 to establish a society dedicated to obstetric anesthesiology and improving maternal safety1, eventually becoming the Society for Obstetric Anesthesia and Perinatology. In many ways, we are facing the same challenges our field faced in 1968.

Maternal mortality, long used as a benchmark for the quality of maternal care in industrialized countries, has risen in the United States in the last 15 years, with significant increases in infection and sepsis deaths between 2009-2011.2-3 The most recent data from the Confidential Enquiries into Maternal Deaths and Morbidity 2009-2014 in the UK demonstrates no statistically significant differences in direct and indirect maternal deaths between 2009 and 2014;4 however it appears that an increasingly complex obstetric population has emerged due to worsening of medical conditions. Over 25% of maternal deaths during pregnancy and early postpartum were due to a cardiovascular cause.4

What does this exactly mean for our specialty? What challenges face us when dealing with an increasingly more complex population? What lessons and strategies can we learn from the founders of SOAP?

Obstetric anesthesiologists once again have an opportunity to convene and address the rising rate of maternal mortality. In order to achieve this, our scope of practice will have to evolve into a more comprehensive role, spanning the entire peripartum period. Conceptually, this already exists. The “perioperative medicine” practice model is quickly gaining popularity and some anesthesiology programs are following suit by offering fellowships in perioperative medicine. What is our version of the perioperative practice model? What will obstetric anesthesiology practice look like; or what should it look like in 5, 10 or 20 years?

Already, current demographic data is offering clues about possible strategies moving forward. Providing anesthetic care outside of the labor and delivery suite will be central to this strategy and presents a challenge and opportunity for obstetric anesthesiologists. Many pregnancy related deaths are considered preventable and delay in care is considered a direct cause of maternal mortality.5 Our expertise as physiologists will demand that we implement evidence based protocols to identify and treat these patients before, during, and after an ICU admission. Maternal ICU admissions already represent up to 16% of admissions in women ages 16-50.6 In developed countries, maternal death represents approximately 1 in 20 ICU admissions.7

Old modalities are finding increased use. Obstetric anesthesiologists are increasing their use of transthoracic echocardiography for diagnosis and treatment decisions, especially in the critical situation. This increased use of echocardiography will force us to update the training of obstetric anesthesiologists to meet the demands of this increasingly complex patient population. Additionally, other therapies may have expanded use. The 2009 H1N1 epidemic demonstrated the utility of Extracorporeal Membrane Oxygenation (ECMO). During this outbreak, for example, the literature demonstrates maternal and fetal survival of 80% and 70%, respectively, with utilization of ECMO.8 These challenges remind us of the unique opportunity presented to the eventual founders of SOAP. In this instance, faced with the current challenges of our time, we must look back in time for answers. With some imagination, creativity and innovation, we can update our practice and thrust our field into the future while creating evidence-based models of care. After all, our patients require a collective effort to address an increasingly complex obstetric population. Future generations will judge us by how we respond to the current challenges facing our patients.

References

Resident Affairs Committee continues on next page
Announcements

Congratulations:

Dr. Jill M. Myhre was recently named the inaugural recipient of the Dola S. Thompson, MD Professorship in Anesthesiology at The University of Arkansas. Currently, Jill serves as the Division Head of Obstetric Anesthesiology at UAMS as well as the executive editor for the Obstetric Anesthesia section of Analgesia & Anesthesia. Way to go, Jill!

Good-bye to a Friend:

We are sad to announce that Judy Johnson, a staple of the University of California San Francisco program and Sol Shnider meeting has died after a long battle with chronic illness. Judy, we will miss you!

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### 2016-2017 SOAP Board of Directors

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<th>Position</th>
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<td>Robert R. Gaiser, MD</td>
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