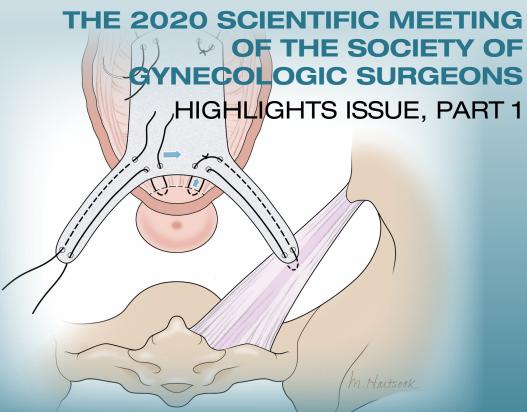


SPECIAL SECTION



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Even in a virtual environment, the Society of Gynecologic Surgeons delivers without a "glitch"

The events typical of in-person meetings, such as abstracts, videos, postgraduate courses, and keynote addresses, were offered, with much interaction between participants

Patrick J. Culligan, MD

arlier this year, I was honored to serve as the Scientific Program Chair for the 46th Annual Scientific Meeting of the Society of Gynecologic Surgeons (SGS). This year's meeting was the first ever (and hopefully last) "virtual" scientific meeting, which consisted of a hybrid of prerecorded and live presentations. Although faculty and attendees were not able to be together physically, the essence of the lively SGS meetings came through loud and clear. We still had "discussants" comment on the oral presentations and ask questions of the presenters. These questions and answers were all done live—without a glitch! Many thanks to all who made this meeting possible.

In addition to the outstanding abstract and video presentations, there were 4 superb post-graduate courses:

- Mikio Nihira, MD, chaired "Enhanced recovery after surgery: Overcoming barriers to implementation."
- Charles Hanes, MD, headed up "It's all about the apex: The key to successful POP surgery."
- Cara King, DO, MS, led "Total laparoscopic hysterectomy: Pushing the envelope."
- Vincent Lucente, MD, chaired "Transvaginal reconstructive pelvic surgery using graft augmentation post-FDA."

Many special thanks to Dr. Lucente who transformed his course into a wonderful article for this special section of OBG MANAGEMENT (see next page). These courses were well attended and quite interactive despite the virtual format.

One of our exceptional keynote speakers was Marc Beer (a serial entrepreneur and cofounder, chairman, and CEO of Renovia, Inc.), whose talk was entitled "A primer on medical device innovation—How to avoid common pitfalls while realizing your vision." Mr. Beer has turned this topic into a unique article for this special section (see next month's issue for Part 2).

Our TeLinde Lecture, entitled "Artificial intelligence in surgery," was delivered by the dynamic Vicente Gracias, MD, professor of surgery at Robert Wood Johnson University Hospital, New Brunswick, New Jersey. We also held 2 live panel discussions that were very popular. The first, "Work-life balance and gynecologic surgery," featured various perspectives from Drs. Kristie Green, Sally Huber, Catherine Matthews, and Charles Rardin. The second panel discussion, entitled "Understanding, managing, and benefiting from your e-presence," by experts Heather Schueppert; Chief Marketing Officer at Unified Physician Management, Brad Bowman, MD; and Peter Lotze, MD. Both of these panel discussions are included in this special section as well (with the latter on page SS8).

I hope you enjoy the content of this special section of OBG MANAGEMENT highlighting the 2020 SGS meeting. Watch for part 2 in the next issue, and I hope to see you at our 47th Annual Scientific Meeting in Palm Springs, California, in March 2021.

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Transvaginal reconstructive surgery for POP: Innovative approach to graft augmentation in the post-mesh era

These surgeons describe a novel technique for transvaginal reconstruction using a biologic allograft product

Jessica Sosa-Stanley, MD; Vincent R. Lucente, MD, MBA; Michael J. Kennelly, MD; and Sachin B. Shenoy, MD

elvic organ prolapse (POP) is a common occurrence over the course of a woman's lifetime, especially in parous women (up to 50% of women who have given birth).¹ The anterior vaginal wall is the most common site of POP and has the highest recurrence rate of up to 70%.² The risk of developing POP increases with age, obesity, White race, family history, and prior pelvic surgery, such as hysterectomy. It affects more than 3 million women in the United States alone, often negatively impacting sexual function and overall quality of life.³,4

Because women are living longer than ever before and are more active in their senior years, a long-lasting, durable surgical repair is desirable, if not necessary. To be cost-effective and to avoid general anesthesia, the surgical approach ideally should be vaginal.

Biologic and synthetic grafts to augment transvaginal repair traditionally are used to improve on the well-recognized high failure rate of native-tissue repair that is often seen at both short-term and medium-term follow-up.⁵ The failure rate is commonly referenced as 30% to

Dr. Lucente reports that he has received grant or research support from Advanced Tactile Imaging, Boston Scientific, Coloplast, FemSelect, and Valencia; serves as a consultant to Coloplast and Contura; and is a speaker for Allergan, Boston Scientific, Coloplast, Duchesnay, FemSelect, and Neomedic. Dr. Kennelly reports that he has received grant or research support from Coloplast and Boston Scientific and serves as a consultant to Coloplast and Boston Scientific. Dr. Sosa-Stanley and Dr. Shenoy report no financial relationships relevant to this article.

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40% at 2-year follow-up and 61% to 70% at 5-year follow-up, well-established by the results of the OPTIMAL randomized clinical trial. The more recent Descent trial likewise demonstrates a higher failure rate of native-tissue repair versus transvaginal mesh repair at a shorter term of 30 to 42 months. Furthermore, the use of permanent versus absorbable suture in suspension of the vaginal apex is associated with lower short-term failure rates.

Despite this Level I evidence that demonstrates a clear advantage for obtaining a longer or more durable repair with permanent materials, native-tissue repairs with absorbable suture are still performed routinely. Since the US Food and Drug Administration (FDA) ordered that the use of transvaginal surgical mesh augmentation for pelvic reconstructive surgery be discontinued, it is more important than ever to explore evolving alternative native-tissue augmentation repair techniques that hopefully can preserve the advantages and merits of vaginal surgery and achieve longer durability.⁹

Biologic graft augmentation use in transvaginal reconstruction

All biologic grafts, including allografts derived from human tissue and xenografts derived from animal tissue, are acellular constructs composed of extracellular matrix (ECM) that acts as scaffolding for the host tissue. The ECM is predominantly composed of collagen (types I and III) and noncollagenous fibronectin, laminin, and glycosaminoglycans in various amounts depending on

the source tissue. The 3D presentation of ECM's complex molecules allows for rapid repopulation of host cells and revascularization with eventual regeneration.

Once a biologic graft is placed surgically, the body's response to the scaffold ECM mimics the normal wound-healing process, beginning with fibrin-rich matrix hemostasis and the subsequent innate immune response of neutrophil and M1 macrophage infiltration. M1 macrophages are proinflammatory and clear cellular debris and begin the process of graft scaffold degradation. The host tissue then begins the process of remodeling through pro-remodeling M2 macrophages and stem cell recruitment, proliferation, and differentiation.¹⁰ As the biologic graft provides initial structure and strength for pelvic repairs, the ideal ECM scaffold would not degrade before the host is able to fully undergo regeneration and maintain its structure and strength.

Biologic grafts differ in source (allograft or xenograft), type (pericardium, dermis, or bladder), developmental stage (fetal or adult), decellularization processing, and sterilization techniques. These 5 aspects determine the distinct 3D ECM scaffold structure, strength, and longevity. If the ECM scaffold is damaged or retains noncollagenous proteins during the preparation process, an inflammatory response is triggered in which the graft is degraded, resorbed, and replaced with scar tissue. Furthermore, certain processing techniques aimed at extending the ECM's durability—that is, cross-linking collagen—results in the foreign body response in which there is no vascular infiltration or cellular penetration of the graft and a collagen capsule is created around the empty matrix.11 To avoid resorption or encapsulation of the graft, the ECM scaffolds of biologic grafts must be optimized to induce regeneration.

Choosing surgical POP repair

The decision to undergo surgical treatment for prolapse is a shared decision-making process between the patient and surgeon and always should be individualized. The type of procedure and the surgical approach will depend on the patient's goals, the degree of prolapse, clinical history, risk tolerance, the surgeon's skill set, and whether or not there is an indication or relative contraindication for uterine removal at the time of prolapse repair.

While the FDA's order does not apply to transabdominally placed surgical mesh, such as sacrocolpopexy, not all patients are ideal candidates for an abdominal sacrocolpopexy. Most notable are women with a history of multiple prior abdominal surgeries with higher rates of intraperitoneal adhesions. Ideally, to be cost-effective and to avoid general anesthesia, the surgical approach should be vaginal whenever possible.

Biologic versus native-tissue grafts

Currently, only low-quality evidence exists that compares the outcomes of biologic grafts with traditional native-tissue repairs in POP. Studies have been limited by poor reporting of methods, inconsistency in technique and materials used, and imprecise definitions. One Cochrane Review on the surgical management of POP concluded that biologic graft augmentation was associated with a lower failure rate (18%) within 1 to 2 years when compared with a traditional anterior colporrhaphy (28%).¹²

Based on consideration of all Cochrane Database Reviews and recent large systematic reviews, there clearly is a paucity of information on which to draw well-defined conclusions regarding the advantage of biomaterials in prolapse surgery. ¹²⁻¹⁴ This is due in part to the variation in graft material used and the surgical technique employed.

Similarly, evidence is lacking regarding the superiority of one type of biologic graft over another. Furthermore, some of the grafts previously studied are no longer on the market. With the FDA's removal of all transvaginal mesh, including xenografts, only allografts are available for pelvic floor reconstruction. Currently, only 3 commercial manufacturers market allografts for pelvic floor reconstruction. Each allograft is available in various sizes and all can be trimmed at the time of the surgical procedure to customize both the size and shape to fit the individual patient.

A novel technique using Axis Dermis and polypropylene suture

One of the commercially available allografts, Axis Dermis (Coloplast), is non-cross-linked and is

derived from human cadaveric dermal tissue from the back and dorsum of the upper leg. It is sterilized by a proprietary Tutoplast sterilization process that uses gamma irradiation to inactivate and prevent the transmission of pathogens. This unique technique involving solvent dehydration means the graft is never freeze dried; thus, the natural tissue matrix is preserved.

Additionally, the allograft is antigen-free, which decreases the risk of tissue reaction (scarring/fibrosis) and aids in the process of host tissue remodeling; invasion by growth factors, blood cells, collagen, elastin, and neovascularization. This natural tissue remodeling facilitates the anticipated "reabsorption" of the graft by the host

tissue, leaving the patient with a tissue scaffold, that is, a stronger layer of "fascia" beneath the muscularis. ¹⁶ As a result of this "biocompatible" graft, the host tissue remodeling has been shown in the rat model to involve early cellular infiltration and angiogenesis (in the first week after implantation), that leads to an organized cellular architecture with greater tensile strength by week 4, and ultimately inability to distinguish host collagen from the implant by 8 to 12 weeks. ^{17,18}

Steps in performing the technique

To ensure that the graft is placed adjacent to the vaginal serosa, a full-thickness dissection is carried out to enter the true vesicovaginal space, which lies below all 4 histologic layers of the vagina (nonkeratinized stratified squamous epithelium, lamina propria, muscularis, and serosa). For the anterior dissection, a Tuohy epidural needle is used to achieve an accurate and consistent depth when injecting fluid (hydrodissection) to enter this true pelvic space (FIGURE 1). Correct entry into the vesicovaginal space can be confirmed visually by the presence of adipose tissue.

Many pelvic surgeons use the sacrospinous ligament (SSL) as a strong and reliable point of attachment for vaginal prolapse repair. It can be approached either anteriorly or posteriorly with careful dissection. Permanent suture (0-Prolene) is used to "bridge" the attachment between the SSL, the Axis Dermis graft, and the cervix

FIGURE 1 Hydrodissection of the vesicovaginal space



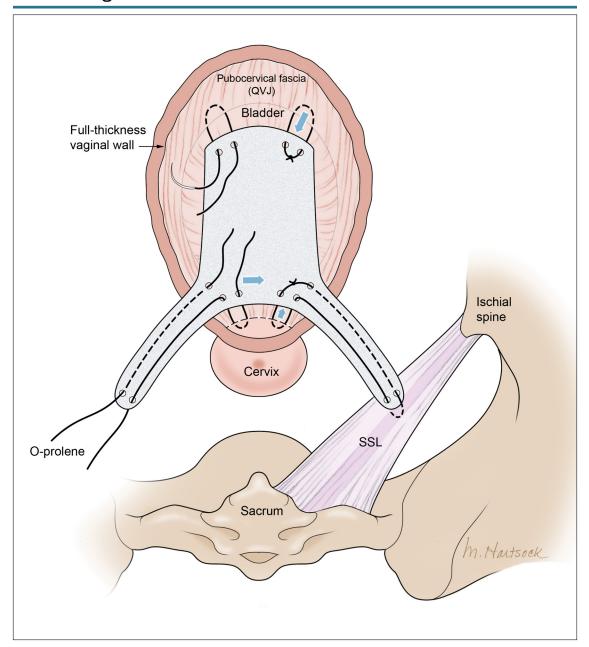
(or vaginal apex). The suture is placed in the middle third and lower half of the ligament to avoid injury to nearby neurovascular structures.

While the surgeon may use any suture-capturing device, we prefer the Anchosure System (Neomedic). This device delivers a small anchor securely into the ligament through a single point of entry, minimizing the risk of postoperative pain for the patient. A $6 \, \text{cm} \times 8 \, \text{cm}$ size Axis Dermis graft is then trimmed to meet the specifications of the patient's anatomy.

Most commonly, we measure, mark, and trim the body of the graft to 5.5 cm in length with a width of 3 cm. The bilateral arms are approximately 1 cm in width and comprise the remaining length of the 8 cm graft (FIGURE 2, page SS6). As shown in Figure 2, pre-made holes are marked and punched out using a large hollow needle. These serve as the points of attachment for the permanent suture to be "weaved" into the graft arms and delayed absorbable "tacking suture" to be attached from the pubocervical fascia at the bladder neck to the distal end of the graft. This facilitates fixation of the graft in the midline of the anterior vaginal wall, overlying any central distention-type defect.

Finally, following attachment of the SSL permanent suture to the distal graft arm, this suture is then attached to the proximal U-shaped end of the graft body (in the midline), followed by a deep and secure bite through the cervix (or vaginal vault apex) and back through the proximal graft. These

FIGURE 2 Biologic allograft augmentation use in transvaginal reconstruction



SSL suspension sutures are then tied such that the distal arms of the graft advance down to the ligament. Care is taken not to tie down to the SSL itself, rather until the cervix (or apex) is reduced to its normal anatomical location.

After the graft is secured in place, the full-thickness vaginal wall is closed with delayed absorbable suture. Sterile 1-inch ribbon packing is

placed in the vagina immediately to close any dead space between the vagina and the graft to decrease the risk of seroma or hematoma formation.

This newly developed technique, like many surgeries for POP, requires extensive knowledge of pelvic anatomy and skill in vaginal surgery, and we recommend referral to a subspecialist in Female Pelvic Medicine and Reconstructive Surgery.

Upcoming plans to share outcomes data

We are in the process of performing a retrospective review of all of the cases we have performed at our institution using this technique of permanent suture bridging to the SSL within the arm of the biograft. Given the relatively recent FDA announcement, we have yet to establish any long-term outcomes data. However, the preliminary results at 6-month follow-up are promising and demonstrate a low (2.6%) failure rate, without significant safety concerns. We hope to publish these data as well as more data on longitudinal outcomes in the future.

In summary

Many women are at risk for native-tissue repair failure or are not well suited for an abdominal procedure to correct their pelvic support defect and restore their quality of life. As expert pelvic surgeons, we play an important role in the search for innovative solutions for these women. There is ample opportunity for future research and clinical trials to determine the best biologic materi-

WATCH THE VIDEO



See the online version of this article at http://www.mdedge.com/obgyn

als and their optimal use in pelvic reconstructive surgery.

Originally, polypropylene mesh was designed for use in augmenting abdominal hernia repairs and later was adapted by manufacturers for use in POP repair. The FDA removal from the market of existing transvaginal synthetic mesh kits was a unique catalyst that challenged our community to develop transvaginal repairs using biologic grafts that are genuinely tailored to the unique needs of the female pelvic anatomy.

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ROUNDTABLE

How to build your identity as a physician online

With the right know-how you can maximize your e-presence, optimizing your website, growing your patient base, and managing your reputation at the same time

Expert panel featuring Patrick J. Culligan, MD; Brad Bowman, MD; Peter M. Lotze, MD; and Heather Schueppert

o have a thriving business in today's world, a functioning website is crucial to the overall business health. For a medical practice in general, and for its physicians specifically, it is one of the first steps for maintaining a practice. But to grow that practice, it is crucial to take the steps beyond just having a website. Growth requires website optimization for search engines, an expanding referral base, and the knowledge to use web tools and social media at your disposal to promote the practice and its physicians. In this roundtable, several marketing experts and web-savvy physicians discuss using available tools to best position and grow a practice.

Choosing a web upgrade

Patrick J. Culligan, MD: Peter, can you start us off by describing your relationship with Heather, and how your practice benefitted from her expertise? Peter M. Lotze, MD: Sure. I am a urogynecologist in the competitive market of pelvic reconstructive surgery in Houston, Texas. Within that market, my main approach was to reach out to other physicians to refer patients to my practice. It generally would work, but took increasingly greater amounts of time to call these physicians up, write them letters, and maintain relationships. I felt that the large, national practice group that I am in did not have a significant web presence optimized to promote my practice, which makes it difficult for patients seeking your services to find you in their search for a doctor. It is helpful for patients to be able to understand from your website who you are, what you do, and what their experience may be like.

Glaring to me was that a web search specific for me or things that I do, would not produce our

company's results until page 2 or more on Google. This can be devastating for a practice because most people don't go past the first page, and you can end up with fewer self-referrals, which should be a significant portion of new patients to your practice. I knew I needed guidance; I knew of Heather's expertise given her exceptional past work building marketing strategies.

Digital go-tos for marketing

Heather Schueppert: Yes, I was pleased to work with Dr. Lotze, and at the time was a marketing consultant for practices such as his. But gone are the days of printed material—brochures, pamphlets, or even billboards—to effectively promote a business, or in this case, a practice. What still withstands the test of time, however, as the number 1 marketing referral source is word of mouth—from your trusted friend, family member, or coworker.

It is now proven that the number 2 most trusted form of advertising, the most persuasive and the most motivating, is online marketing. It is the "digital word of mouth"—the review. Patients are actively online, and a strong digital presence is critical to provide that direct value to retain and grow your patient base.

Foundations of private practice reach out

There are 3 important areas that I consider the foundation of any private practice marketing strategy (TABLE). First is an updated website that is search engine optimized (SEO). You can't just set it and forget it, it needs to be an updated website. The algorithms for search engines are changing constantly to try to make it as fair and

TABLE Checklist for building and maintaining your e-presence

- · Local search audit and completion
- · Updated, SEO-optimized website
- Review management with focus on patient satisfaction questions
- · Regular and relevant social media

relevant as possible for patients or consumers to find the businesses they are searching for online.

The second area is review management, and for a physician, or even a care center, to do this on your own is a daunting task. It is a critical component, however, to making sure that your reputation out there, that online word of mouth, is as high a star rating as possible.

The third component is local search, which is basically a form of SEO that helps businesses show up in relevant local searches. We are all familiar with the search, "find a restaurant near me," anything that pushes those search engines to find something local.

Those are what I call the effective triad: that updated website, the review management, and the local search, and all of these are tied together. I think Dr. Lotze and his practice did these effectively well, and I believe that he achieved his goals for the longer term.

Review/reputation management

Dr. Culligan: Brad, is there something that doctors may not know about Healthgrades, and are there opportunities to take full advantage of this physician-rating site?

Brad Bowman, MD: I agree with everything that Dr. Lotze and Heather have said. Start with yourself—what is it that you want to be, the one thing you want to stand for? Get your own marketing, your website right, then, the point is, once you do all that and you are number 1 in SEO, you are still only going to get about 25% of the people looking for you by name to come to your website. The other 75% are going to look at all the other different sites that are out there to provide information to consumers. So the question becomes what do you do with all these other third-party sites? Healthgrades is the most comprehensive and has the highest traffic of the third-party "find a doctor"

sites. In 2020, half of all Americans who go to a doctor will use Healthgrades at some point to help select and connect with that doctor.

Physicians have their focus on the quality of the care they provide. Patients, however, focus on the quality of the entire health care experience. Did I get better? How long did I have to wait? Was the office staff helpful? Scarily enough, we still spend more time shopping for a refrigerator or mattress than we do shopping for a doctor. We still tend to think that all doctors are the same. It is the reality of how we have been trained by our insurance companies and by the health care system. That is why getting your marketing right and getting what is it that you want to be known for out there is important, so that you can get the types of patients you want.

Listings management is very important. Make sure that you are findable everywhere. There are services that will do this: Doctor.com, Reputation .com, and many others. They can help you make sure you get all your basic materials right: addresses, phone numbers, your picture. Because 75% of people are going to end up on third-party websites, if your phone number is wrong there, you could lose that patient.

OBG MANAGEMENT EXPERT PANEL

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Then the second piece of working with third-party sites is reputation management. Physician reviews are not a bad thing, they are the new word of mouth, as Heather pointed out. Most (80%) of the reviews are going to be positive. The others will be negative, and that is okay. It is important that you get at least 1 or 2 reviews on all the different sites. We know from Healthgrades.com that going from zero reviews to 1 review will increase your call volume by 60%. If you have the choice between 2 physicians and one practice looks like people have been there before, you will go to that one.

You can learn from reviews as well, consumers provide valid feedback. Best practice is to respond to every positive and negative review. Thank them, indicate that you have listened to them, and address any concerns as necessary.

Dr. Lotze: As an example, one of the paramount things that Heather introduced me to was the third party I use to run my website. That company sends a HIPAA-compliant review out to each patient we have seen that day and gives them the opportunity to rate our services and leave comments. If a patient brings up a concern, we can respond immediately, which is important. Patients appreciate feeling that they have been heard. Typically, communicating with a patient will turn the 3-star review into a 5-star as she follows up with the practice.

Ms. Schueppert: Timeliness is important. And just to mention, there certainly is a time commitment to this (and it is a marathon versus a sprint) and there is some financial investment to get it going, but it could truly be detrimental to a practice if you decide not to do anything at all.

Dr. Bowman: Agencies can really help with the time commitment.

Handling bad reviews

Dr. Culligan: What about that person who seems to have it out for you, perhaps giving you multiple bad reviews?

Dr. Bowman: I have seen this before. At Healthgrades, we recently analyzed 8.4 million patient reviews to see what people wrote about.² The first thing they will talk about is quality of care as they see it. Did I get better or not? You can't "fix" every patient; there will be some that you cannot help. The next thing patients comment on is bedside manner. With negative reviews, you will see more comments about the office staff.²

A single negative review actually helps make the positive ones look more credible. But if you do believe someone is trolling you, we can flag it and will investigate to the best of our ability. (Different sites likely have different editorial policies.) For example, we look at the IP addresses of all reviews, and if multiple reviews are coming from the same location, we would only let one through, overwriting the previous review from that address.

Patients just want to be heard. We have seen people change their views, based on how their review is handled and responded to.

Dr. Lotze: Is there a response by the physician that you think tends to work better in terms of resolving the issue that can minimize a perceived caustic reaction to a patient's criticism?

Dr. Bowman: First, just like with any stressful situation, take a deep breath and respond when you feel like you can be constructive. When you do respond, be gracious. Thank them for their feedback. Make sure you reference something about their concern: "I understand that you had to wait longer than you would have liked." Acknowledge the problem they reference, and then just apologize: "I'm sorry we didn't meet your expectations." Then, if they waited too long for example, "We have a new system where no one should have to wait more than 30 minutes...." You can respond privately or publically. Generally, public responses are better as it shows other consumers that you are willing to listen and consider their point of view.

The next phase at Healthgrades

Dr. Culligan: Do you see changes to the way physician-rating sites are working now? Are we going to stay status quo over the next 10 years, or do you see frontiers in how your site is going to develop? **Dr. Bowman:** For Healthgrades, we rely on quantitative and objective measures, not just the qualitative. We are investing heavily right now in trying to help consumers understand what are the relative volumes of different procedures or different patient types that each individual doctor sees. Orthopedics is an easy example—if you have a knee problem, you want to go to someone who specializes in knees. Our job is to help consumers easily identify, "This is a shoulder doctor, this is a knee doctor, and this is why that matters."

In the meantime, as a physician, you can always go into our site and state your care philosophy,

identifying what is the sort of patient that you like to treat. Transparency is good for everyone, and especially physicians. It helps the right patient show up for you, and it helps you do a better job providing referrals.

Social media: Avoid pitfalls, and use it to your benefit

Dr. Lotze: Branding was one of the things that I was confused about, and Heather really helped me out. As physicians, we put ourselves out there on our websites, which we try to make professional sources of information for patients. But patients often want to see what else they can find out about us, including Healthgrades and social media. I think the thing that is important to know with social media is that it is a place where people learn about you as a person. Your social media should be another avenue of promotion. Whether it is your personal or professional Facebook page, people are going to see those sites. You have an opportunity to promote yourself as a good physician and a good person with a wholesome practice that you want people to come to. If a physician is posting questionable things about themselves on any kind of social media, it could be perceived as inappropriate by the patient. That can impact how patients think of you as a person, and how they are going to grade you. If people lose sight of who you are due to a questionable social media posting, everything else (SEO, the website) can be for naught.

Dr. Culligan: What are the most important social media tools to invest your time in?

Ms. Schueppert: Before anybody jumps into social media, I firmly recommend that you make sure your local search and your Google 3-pack is set up—which is basically a method Google uses to display the top 3 results on its listings page. Then make sure you have a review management system in place. Make sure you have that updated website. Those are the foundational elements. Once you have that going, social media is the next added layer to that digital presence.

I usually recommend LinkedIn. It is huge because you are staying in contact with your colleagues, that business-to-business type of connection. It remains a way for physicians to set themselves up as experts in their level of specialty.

From there, it's either Instagram or Facebook. If you are serving more of the younger generations, the millennials and younger, then Instagram is the way to go. If you are focusing on your 40+, 50+, they are going to be far more on Facebook.

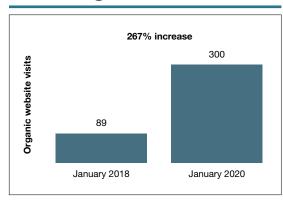
Dr. Lotze: For me, a Facebook page was a great place to start. The cost of those Google ads-the first things we see at the top of a Google search in their own separate box—is significant. If a practice has that kind of money to invest, great; it is an instant way to be first on the page during a search. But there are more cost-effective ways of doing that, especially as you are getting your name out. Facebook provides, at a smaller cost, promotion of whatever it is that you are seeking to promote. You can find people within a certain zip code, for instance, and use a Facebook ad campaign that can drive people to your Facebook page-which should have both routinely updated new posts and a link to your website. The posts should be interesting topics relevant to the patients you wish to treat (avoiding personal stories or controversial discussions). You can put a post together, or you can have a third-party service do this. People who follow your page will get reminders of you and your practice with each new post. As your page followers increase, your Facebook rank will improve, and your page will more likely be discovered by Facebook searches for your services. With an added link to your office practice website, those patients go straight to your site without getting lost in the noise of Google search results.

For Instagram, a short video or an interesting picture, along with a brief statement, are the essentials. You can add a single link. Marketing here is by direct messaging or having patients going to your website through a link. Instagram, like Facebook, offers analytics to help show you what your audience likes to read about, improving the quality of your posts and increasing number of followers.

YouTube is the number 2 search engine behind Google. A Google search for your field of medicine may be filled with pages of competitors. However, YouTube has a much lower volume of competing practices, making it easier for patients to find you. The only downside to YouTube is that it will list your video along with other competing videos, which can draw attention away from your practice.

If you want to promote your website or practice with video, using a company such as Vimeo is a better choice compared with YouTube, as YouTube gets credit for video views—which improves YouTube's SEO and not your own website. Vimeo allows for your website to get credit each time the

FIGURE Web traffic before and after hiring a webmaster



video is watched. Regardless of where you place your videos, make them short and to the point, with links to your website. Videos only need to be long enough to get your message across and stimulate interest in your practice.

If you can have a blog on your website, it also will help with SEO. What a search engine like Google wants to see is that a patient is on your web page and looking at something for at least 60 seconds. If so, the website is deemed to have information that is relevant, improving your SEO ranking. Finally, Twitter also can be used for getting messaging out and for branding. The problem with it is that many people go to Twitter to follow a Hollywood celebrity, a sports star, or are looking for mass communication. There is less interest on Twitter for physician outreach.

Measuring ROI

Dr. Culligan: What's the best way to track your return on investment?

Dr. Lotze: First for me was to find out what didn't work in the office and fix that before really promoting my practice. It's about the global experience for a patient, as Brad mentioned. As a marketing expert, Heather met with me to understand my goals. She then called my office as a patient to set up an appointment and went through that entire office experience. We identified issues needing improvement.

The next step was to develop a working relationship with my webmaster—someone who can help manage Internet image and SEO. Together, you will develop goals for what the SEO should promote

specific to your practice. Once a good SEO program is in place, your website's ranking will go up—although it can take a minimum of 6 months to see a significant increase. To help understand your website's performance, your webmaster should provide you with reports on your site's analytics.

As you go through this process, it is great to have a marketing expert to be the point person. You will work closely together for a while, but eventually you can back off over time. The time and expense you invest on the front end have huge rewards on the back end. Currently, I still spend a reasonable amount of money every month. I have a high self-referral base because of these efforts, however, which results in more patient surgeries and easily covers my expenses. It is money well invested. My website traffic increased by 268% over 2 years (FIGURE). I'll propose that currently more than half of my patients are self-referrals due to online marketing.

Ms. Schueppert: The only thing I would add is training your front staff. They are checking people in, taking appointments, checking your patients out. Have them be mindful that there are campaigns going on, whether it is a social media push, or a new video that went on the website. They can ask, "How did you hear about us?" when a new patient calls.

Dr. Bowman: Unless you are a large university hospital, where the analytics get significantly more advanced in terms of measuring return on investment (ROI), I think you should just be looking at your schedule and looking at your monthly billings and seeing how they change over time. You can calculate how much a new patient is worth because you can figure out how many patients you have and how much you bill and what your profits are.

Dr. Culligan: For those of us who are hospital employees, you can try to convince the hospital that you can do a detailed ROI analysis, or you can just look at it like (say it's \$3,000 per month), how many surgeries does this project have to generate before the hospital makes that back? The answer is a fraction of 1 case.

Thank you to all of you for your expertise on this roundtable.

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