Continuing Medical Education Committee
Thursday, May 12, 2016 • 7:00 am - 8:00 am
Conference Center Room #6

Agenda

Open
Welcome and Announcements
*Review of March Meeting Minutes

Sandra Weber, MD

Family Medicine
Molly Benedum, MD

GHS
Psychiatry Research Showcase May 25, 2016
“Sharing the Journey: Where Spirituality and Mental Health Meet” Approved/Update
Calvert Warren, MD

Independent

Internal Medicine
Nanette Dendy, MD
*Lloyd Hayes Symposium August 20, 2016 Application/Approval
*2016 Stroke Symposium September 24, 2016 Application/Approval

OBGYN
William Coleman, MD
C. M. Easley Symposium May 20, 2016 Approved/Update

Oncology
David Grisell, DO

Orthopaedics
Chris Bray, MD
41st Annual Orthopaedic Day May 20, 2016 Approved/Update

Pediatrics
Robert Saul, MD

Surgery
Charles Kanos, MD
24th Annual J.D. Ashmore Lectureship June 10, 2016 Approved/Update

*Urology Journal Club (SURUROJC16) Application/Approval

*Urology M&M Conference (SURUROMM16) Application/Approval

*Vascular Lab Conference (SURVASLAB16) Application/Approval
CME Activity Review
Nurturing Developing Minds February 26, 2016 Robert Saul, MD

60th Annual Greenville Postgraduate Seminar April 20-22, 2016 Molly Benedum, MD

Southeastern Symposium on Mental Health May 6-7, 2016 Calvert Warren, MD

New Business
*Pediatric Quality M&M credit increase from 6 to 12 (1 hour sessions). Robert Saul, MD

Old Business
CME Transition Bob Best, PhD

ACCME Accreditation Bob Best, PhD

Pediatric Grand Rounds Space Robert Saul, MD

CME Software/App Update Debbie Kirkland

*Document attached

The next CMEC Meeting will be held on July 14, 2016
from 7:00 a.m. to 8:00 a.m. in the Conference Center Room #6

SharePoint – All documentation is listed in full on SharePoint, backed-up by
Hospital IT system with a hard copy on file in the CME Office
Members Present
Sandra L. Weber, MD  Chairperson
Edward W. Bray, MD  GHS GME/CME – Orthopaedics representing C. Bray, MD
Nanette E. Dendy, MD  Internal Medicine
Molly Benedum, MD  Family Medicine
William A. Coleman, MD  OB-Gyn
Charles C. Kanos, MD  Surgery
Robert A. Saul, MD  Pediatrics
Calvert Warren, MD  Psychiatry/Member-at-Large
Hurschell F. Mathews  CME Director/ex-Officio

Members Not Present
Christopher C. Bray, MD  Orthopaedics – Proxy given to Edward Bray, MD
David L. Grisell, DO  Oncology/Member-at-Large

Non-Members Present
Sally Cade  CME Coordinator
Rachel Andes  CME Coordinator
Debbie Kirkland  CME Administrative Assistant
Michael Wiederman, PhD  Director of Faculty Affairs

Non-Members Not Present
Robert Best, PhD  USC SOMG Office of Faculty Affairs

Open
Sandra Weber, MD
Welcome and Announcements -- A quorum was determined and the meeting was opened by Dr. Sandra Weber at 7:07 a.m. and everyone was welcomed. Dr. Weber extended a warm welcome to Michael Wiederman, PhD. She invited him to give input as the meeting continued. He attended the meeting in Robert Best, PhD stead.

Hurschell F. Mathews formally announced to the committee that this would be his last Continuing Medical Education meeting. He stated that during the past 18 years he has attended 106 meetings. Dr. Weber thanked Hurschell for all of his years of service and dedication.

Michael Wiederman, PhD also thanked Hurschell for all that he has done for the Greenville Health System’s Continuing Medical Education department. Michael also stated that once the position is filled then the process would begin for seeking ACCME national accreditation. Dr. Edward W. Bray was next to thank Hurschell and as the Associate Dean for GME and CME
noted that for those many years with Hurschell in charge of CME and a great chair, he never had to worry about any CME activity.

**Approval of Meeting Minutes**
The minutes of the January meeting were distributed and reviewed by all present. A motion to approve was made by Dr. Robert Saul and a second to the motion was made by Dr. Molly Benedum. Hearing no additions or deletions, all voted in favor and so the minutes for the January CMEC meeting were approved.

**GHS**
Southeastern Symposium on Mental Health May 6-7, 2016 Approved/Update
Dr. Warren acknowledged that the development and organization of this activity took longer than any of the committee expected. The fact that most of the committee was new including himself did not help. The final agenda has been submitted and reviewed by the CME committee. The CME committee expressed that planning should begin even earlier for this activity next year. Rachel Andes stated that once the final brochure has been sent to the CME office as a pdf, the registration will be opened.

Psychiatry Research Showcase May 25, 2016 Approved/Update
“Sharing the Journey: Where Spirituality and Mental Health Meet” Application/Approval
Dr. Sandra Weber stated the application contains all of the Essentials for CME and would accept a motion for approval of this application for CME credit.
Motion made to approve by Dr. Robert Saul, second made by Dr. Nanette Dendy, all in favor and so approved.

Quality, Safety and Ethics in Psychiatry Renewal application not received
The application was not submitted for the March meeting but Psychiatry will work hard to have everything ready for the May CME meeting. Until a new application is receive and approved there will be no CME credit issued for this activity.

**Family Medicine**
60th Annual Greenville Postgraduate Seminar April 20-22, 2016 Approved/Update
Registration has been open for about a week and there are about 57 registered. The Embassy Suites is in the final stages of renovation and everything should be complete before PGS.

**Internal Medicine**
There are no new activities for Internal Medicine. Everything is going along well.

**OBGYN**
C. M. Easley Symposium May 20, 2016 Approved/Update
Everything is on schedule. The brochure has been sent out with a CME error. Marketing removed the “The” in the CME accreditation statement. Dr. Weber noted that, we have gotten sited by our accreditation body, the SCMA, for this very thing. Remind marketing CME department needs to give final approval prior to sending out.

**Orthopaedics**
41st Annual Orthopaedic Day May 20, 2016 Application/Approval

CME Committee Meeting Minutes for Thursday, March 10, 2016
Dr. Sandra Weber stated the application contains all of the Essentials for CME and would accept a motion for approval of this application for CME credit. Motion made to approve by Dr. Edward Bray, second made by Dr. Robert Saul, all in favor and so approved.

Pediatrics

Robert Saul, MD

Surgery

Charles Kanos, MD

24th Annual J.D. Ashmore Lectureship June 10, 2016 Application/Approval

Dr. Sandra Weber stated the application contains all of the Essentials for CME and would accept a motion for approval of this application for CME credit. Motion made to approve by Dr. Edward Bray, second made by Dr. Robert Saul, all in favor and so approved.

Bioskills Lab for Upper Extremity (Journal Club) Application/Approval

Discussion as to whom the activity was designed for, so it was confirmed that the audience is physicians. CME is very pointed and very little room for interpretation. CME at its core is really designed for MD/DO’s by physicians. Others can attend and receive attendance and use it in some cases with their disciplines such as nurses, nurse practitioners, etc. As the continuing education process continues, how we design activities for the whole of continuity of education will be reviewed. Dr. Sandra Weber stated the application contains all of the Essentials for CME and would accept a motion for approval of this application for CME credit. Motion made to approve by Dr. Edward Bray, second made by Dr. Robert Saul, all in favor and so approved.

Urology PA Fellowship Didactics Application/Approval

Hurschell stated that an email for clarification was received from Dr. Springhart. The activity has been designed for PA’s and they have set up a fellowship didactic series through the CPL and the Clinical University. It is a formal education program but they applied for CME credit and PA’s can use attendance at a CME activity but this was not designed for physician, it was designed for PA’s but it must be designed for MD’s/DO’s. Dr. Springhart was informed that the CME committee would not be reviewing the activity for credit. Dr. Weber stated that we did want to pass it on that as we look at GRE and this whole continuum of education that this is something that needs to be addressed. We have many PA’s here at GHS and need to making sure that the appropriate venue to approve Continuing Education for this group exist.

CME Activity Review

Normal Pressure Hydrocephalus January 16, 2016 Sandra Weber, MD

Dr. Sandra Weber provided a review of the evaluations from Normal Pressure Hydrocephalus. Twenty-six evaluations were submitted. The feedback was positive. Rachel Andes stated that they did an excellent job with the brochure and had registration information out early but still the numbers were low for attendance. Hurschell Mathews stated that this may have been due to the specialized topic.

Cardiology Symposium January 30, 2016 Nanette Dendy, MD

Dr. Nanette Dendy provided a review of the evaluations from the Cardiology Symposium. There were 82 evaluations. The comments ranged from very good to excellent. One attendee committed that it was so good that they didn’t want to take a restroom break. A nurse also commented that the activity seemed to be geared more toward physicians this year. The CME
committee agreed that this was a well-planned activity and had no recommendations for next year.

**Nurturing Developing Minds**  February 26, 2016  **Tabled until May Meeting**

Review of this activity was tabled until next meeting due to the evaluation/attestation 30 day period has not yet closed.

**New Business**

*SCMA Accreditation*

Hurschell Mathews

Greenville Health System has received Accreditation for Four Years from the South Carolina Medical Association. The Accreditation is good until February of 2020. The two items that GHS/CME were cited for are listed below. Due to these two citations, we were unable to obtain accreditation with commendation.

**C7 Compliance:** The provider develops activities/educational interventions independent of commercial interests (SCS 1, 2, 6).

**Noncompliance:** The provider does not develop activities/educational interventions independent of commercial interests (SCS 1, 2, 6).

**Description of performance:**

**SCS 1.1** – The narrative did not describe a complete process. Documentation review indicated a lack of evidence of disclosures from all persons involved with planning and faculty in multiple activity files.

**SCS 2.1, 2.3** – Narrative indicated that the "resolution of conflict" process ended with the completion of the disclosure form – indicated how planner/faculty would resolve their conflict. Narrative indicated the CME Department staff would review. No follow-up with planner/faculty indicated in narrative. Provider did submit a revised Disclosure Policy to reflect incorporation of necessary steps to follow when “conflict” was identified. Evidence of a policy is not evidence of compliance.

**SCS 6** – Narrative indicated an appropriate process; however, evidence from review of activity files did not provide proof of compliance in multiple files. Comments made during interview indicated non-compliance due to timing and location of disclosure. Example – information could be found online when the learner completed evaluation of program.

**C8 Compliance:** The provider appropriately manages commercial support (SCS 3).

**Noncompliance:** The provider does not appropriately manage commercial support (SCS 3).

**Description of performance:**

**SCS 3.10** – The narrative does not address C8-SCS 3.10 and no documentation was found in any of the activity files to reflect a process is in place or followed.

However, the provider did submit a revised policy to include specific guidelines for the expenses of teachers/authors being paid for their teacher or author role only when they are a participant of a CME activity. Evidence of a policy is not evidence of compliance.

There was discussion stating that it is the program director’s responsibility to review the activities, potential conflict of interest, how it would be resolved, collect the documentation
that shows the conflict was resolved and also provide the outcome. Dr. Bray stated that we need to make sure that all the situations have been satisfied.

EPIC CME Credit Update

Sally Cade reported to the committee that within the last two months the CME department had to develop over 35 new EPIC enduring and live activities based on new information obtained from new EPIC team members. The curriculum for EPIC has several prerequisites. There were several methods used to communicate the new expanded listing. Once the list was placed on the website, the EPIC training team was notified to provide the information after each training. Medical staff was notified via email, other attendees were notified through the WHAG, emails were sent to persons that had emailed or called CME with questions. The department continues to work through questions and concerns as they are made known.

CME Transition

Michael Wiederman informed the committee that everything has been put on hold for ACCME accreditation for Greenville Health System until such time as the Medical Director or such position is filed through USCSOM.

Hurschell stated that interviews have taken place for a third coordinator. Hurschell let the committee know that she comes very qualified and highly recommends that she be hired.

Old Business

ACCME Accreditation

Hurschell restated that the ACCME Accreditation has been put on hold until his replacement has been hired.

Pediatric Grand Rounds Space

Robert Saul, MD/Hurschell Mathews

*Letter to Paul Johnson, President - GMH

The enclosed letter was sent to GMH, President Paul Johnson expressing the need for more conference center space. Pediatric Grand Round and other activities have outgrown our current space.

A detailed report was generated by the conference center team to identify available locations and times.

Dr. Saul has reached out to Shriners to see if they have room to host Peds grand rounds and may have a report for the next meeting. Two issues with this are AV staff and the lack of ability to Skype. There was discussion around changing meeting times and locations to work to fit the limitations.

CME Software/App Update

Hurschell reported that the App should be available in May or June of 2016. He would like to continue to be a part of this project and see it through to the end. The systems and departments involved (Survey Monkey, CME Tracker and GHS IT) are all working together to make this happen. We will then be looking for a department to test the app.
Greenwood Genetics Center has reignited interest in establishing a Joint Pediatric Medical Genetics Residency. This will be significant for the institution and Continuing Medical Education for those joint learners and it is already having an impact. With the Fellowship in Maternal Fetal Medicine is establishing a collaborative with Greenwood Genetics Center. Pediatrics had received approval for this about a year ago to establish a collaboration.

Hearing no other new business Dr. Sandra Weber called for adjournment. The meeting was adjourned at 7:58 am.

*Document attached

The next CMEC Meeting will be held on May 12, 2016 from 7:00 a.m. to 8:00 a.m. in the Conference Center Room #6

SharePoint – All documentation is listed in full on SharePoint, backed-up by Hospital IT system with a hard copy on file in the CME Office
### Continuing Medical Education Application

**Date:** 4/10/16  
**Proposed Title of Activity:** Lloyd Hayes Symposium  
**Proposed Date of Activity:** 8/27/16  
**Time:** 8am-5pm  
**Location of Activity:** MSA  
**Medical Dir. responsible for activity:** Michael Fuller  
**Phone Number:** 455-7882  
**Fax:** 455-5008  
**Email:** mfuller@ghs.org  

**Administrative Contact:** Kristie Stone  
**Phone Number:** 455-7882  
**Fax:** 455-5008  
**Email:** kstone@ghs.org  

**Affiliation:** GHS  
**Address:** 701 Grove Road, Dept of Medicine  
**City:** Greenville  
**State:** SC  
**Zip:** 29605  

**Commercial/Financial Support [if applicable]:** Yes X No  
(Any source of funds not provided from GHS operational accounts)  
**If yes, please provide source name:** Vendors/displays  

**Credits requested**  
(add minutes of education activities and divide by 60. Do not include breaks, introduction times, etc.)  

<table>
<thead>
<tr>
<th>Occurrence: Yearly</th>
<th># per year: 1</th>
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<tr>
<td>(i.e. weekly, monthly, etc.)</td>
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This application is designed to assist planners in working through the steps that are required by the Accreditation Council for Continuing Medical Education (ACCME), the South Carolina Medical Association (SCMA) and Greenville Health System (GHS) prior to approval of CME activities sponsored by Greenville Health System.

All of the steps must be taken independently of commercial interests. Further, all persons who are in a position to control CME content must disclose all relevant financial relationships with regards to commercial interest to the CME Department. The GHS-CME Department must implement mechanisms to identify and resolve all conflicts of interest before any CME activity occurs.

Revised August 1, 2014
Step 1: Identifying the educational gap(s)

The planning process begins by identifying at least one educational gap. This educational gap can be expressed as the difference between what actually occurs and what should occur to give the best possible care to our patients.

The person filling out this application must (a) describe the identified gap(s); (b) determine whether closing the identified gap(s) will improve knowledge, enhance competency, and/or change physicians behavior; (c) identify barriers that may need to be overcome to close the gap(s); and (d) describe how the gap was analyzed so the cause of the problem is being addressed through CME.

The latter is termed “needs assessment” and must include at least two different sources. For example, scientific evidence for the literature; opinion from clinical or scientific experts; information from the general public, the media and/or other environmental sources; observed data from local or national databases; and/or survey from past participants or prospective learners. Whenever possible, it is important to utilize our Quality Initiatives and other forms of organizational data to address your department needs assessment.

The purpose of the Lloyd Hayes Symposium is to provide an update of topics relevant to primary care providers. The identified gaps are related to recognition of common and uncommon presentations for conditions encountered in primary care, diagnosis and treatment of common medical conditions, and self-reflection of personal strengths and weaknesses of healthcare delivery.

A. What is/are the educational gap(s)? How was this gap (were these gaps) identified? What is/are the quality gap(s) that this CME activity is Designed to address?

B. What is the reason that the gap exists? Is it because physicians do not know something (i.e., there is a knowledge deficit)? Is it because physicians are not able to do something (i.e., there is a competency deficit)? Is it because the physician did something, or failed to do something (i.e., there is sub-optimal physician behavior)?

In addition to the above, some of these gap concerns are indeed related to a knowledge deficit, a competency deficit, or behavioral issues. This is discussed in another portion of the application.
### Step 2: Identifying the Target Audience

CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients or the profession. **CME activities are intended to increase competency, influence physician behavior, and/or improve patient outcomes.** The major reason for planning your CME activity should be to close the gap(s) you identified in Step 1.

The next step is to identify the target audience for your proposed activity. By clearly identifying the specific target audience for the proposed CME activity, you will be able to plan a learning process that will enable the learners to close the identified gap(s).

You should specify both the general type of health professional that you want to target (i.e., physicians, nurses, pharmacists, etc.) as well as the specific type of learner within those broad categories (e.g., primary care physicians, infectious disease specialists, neurologists, transplant surgeons, etc.).

**Please note:** Only physicians may be awarded *AMA PRA Category 1 Credit*™ by accredited providers. All other non-physician health professionals will receive attendance. For CME, physicians must always be the primary target audience for a continuing medical education activity.

<table>
<thead>
<tr>
<th>Step #2</th>
<th>What is/are the primary target audience(s) that will help close the identified educational gap(s)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Primary care providers throughout the Upstate region</td>
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<tr>
<td>2.</td>
<td>Some providers will attend who practice primary care and subspecialties in medicine since the symposium is associated with an alumni weekend for the medicine residency program at GHS</td>
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<td>3.</td>
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<td>4.</td>
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<td>5.</td>
<td></td>
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<td>6.</td>
<td></td>
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Revised August 1, 2014
Step 3: Specifying the Pertinent ABMS/ACGME Competency

The American Board of Medical Specialties (ABMS), Institute of Medicine (IOM) Core Competencies, and Accreditation Council for Graduate Medical Education (ACGME) have determined that there are six critical competencies that physicians must master in order to provide optimal clinical care. The 3rd step in the CME planning process is to specify which of the following competencies is most relevant to a gap(s) that has/have been identified: (1) patient care; (2) medical knowledge; (3) practice-based learning and improvement; (4) interpersonal and communication skills; (5) professionalism; and (6) systems-based practice. If you would like more information about the six ABMS competencies, please see the following web site:


Step #3
Which of the ABMS/ACGME competencies is most relevant to the gap(s) that were identified?
- Patient care
- Medical knowledge
- Practice-based learning and improvement
- Interpersonal and communication skills
- Professionalism
- Systems-based practice

Step 4: Identifying Potential Partners and Allies

Closing the identified gap may be a daunting task. It is worth your time to consider whether other groups or organizations are working on the same issue. If so, joining forces with them may help you accomplish your common goal of closing the identified gap(s). Working with other groups may increase access to scarce resources, improve efficiency, and produce synergistic partnerships. Importantly, these potential partners may be internal or external to your organization or unit. Step 4 of the planning process involves identifying who these potential partners are.

Step #4
Are there other initiatives within the institution working on the same issue? Do you know of other institutions that could be potential partners in working on this issue? Please list them below.

Not specifically. There is a similar target audience sought for the Family Medicine Post Grad Seminar. This is a multi-day, middle of the week event in the spring. Some primary care providers have indicated that they would prefer (or need) to attend an update event over a shorter period of time during a weekend. We chose a time of year that is off-set by 5-6 months from the other event.

Could these internal or external groups help address or remove barriers? If so, how?

See above. We also are involving some experts for topics from within and outside the institution.

Revised August 1, 2014
Step 5: Identifying Non-Educational Strategies

Numerous research studies have shown that CME interventions can increase competency, influence physician behavior, and/or improve patient outcomes. These findings were confirmed in a 2007 report by the Agency for Healthcare Research and Quality [Evidence Report / Technology Assessment; Number 149: AHRQ, 2007]. Nevertheless, education of health professionals is only one strategy that should be used to improve patient safety and healthcare quality. Importantly, there are many non-educational strategies that may play a crucial role in improving quality. This is especially true when one considers the gaps that can best be addressed with “system-level” interventions. As such, step 5 involves the identification of non-educational strategies that may help close the identified gap(s).

<table>
<thead>
<tr>
<th>Step #5</th>
<th>Are there non-educational strategies (e.g., patient reminders, order sets, computer training check sheets, guidelines, pocket cards, etc.) that are currently being used to close the identified gap(s)? If not, what kind of non-educational strategies could be created/used?</th>
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<tr>
<td></td>
<td>These will occasionally be used depending on the subject/topic.</td>
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Step 6: Determining the Appropriate Evaluation Methodology

In order to determine whether the identified gap(s) has/have been closed, the CME activity must be evaluated. Similarly, the evaluation methodology must match the type of gap that was initially identified in step 1. For example, an activity designed to change the behavior of a physician should not be limited to a post-activity survey that only asks whether participants were satisfied with the quality of the handout materials.

To that end, a useful paradigm that is used in educational circles to measure educational impact involves various levels of evaluation. The ten levels are as follows: (1) learner participation; (2) learner satisfaction; (3) learner knowledge; (4) learner learning, measured before and after an educational intervention; (5) learner competence or ability, measured by a variety of techniques that determine whether a physician can apply the knowledge they have in the care of patients (i.e., this knowledge in practice can be determined by questions that measure application, case-based assessments, and/or simulations); (6) self-reported learner behavioral change, typically determined by participants filling out an “intent-to-change” form immediately following an educational activity, followed by a questionnaire or interview a few months later; (7) documented learner change in behavior, determined by a third party that measured actual behavior both before and after an educational intervention; (8) impact on individual patients, as

Revised August 1, 2014
measured by health outcomes on specific patients; (9) impact on patient populations, as measured by health outcomes on a patient or population cohort; and (10) the cost of the educational intervention, better known as the return on education (ROE).

The first part of step 6 of the planning process requires that you specify which level of educational evaluation would best determine whether the CME activity has closed the identified gap(s) you identified in step 1 in this document. The second part of step 6 involves the selection of one or more tools that will be used to determine whether or not the gap(s) has/have been closed after the intervention is complete.

1. Which of the ten levels of educational evaluation described above will best determine whether your educational activity has closed the identified gap(s)? GHS requires that CME activities measure Level 1 (participation) as well as Level 5 (competence), Level 6 (self-reported learner behavior change), Level 7 documented learner change in behavior, Level 8 (impact on individual patients), or Level 9 (impact on populations). You can check all that apply.

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Participation</td>
</tr>
<tr>
<td>5</td>
<td>Learner competence or ability</td>
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<tr>
<td>6</td>
<td>Self-reported learner behavioral change</td>
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<tr>
<td>7</td>
<td>Documented learner change in behavior</td>
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<tr>
<td>8</td>
<td>Impact on individual patients</td>
</tr>
<tr>
<td>9</td>
<td>Impact on patient populations</td>
</tr>
</tbody>
</table>

2. What type of evaluation method/tool(s) will you use to determine whether the identified gap(s) has/ have been closed? The tool must be able to measure Level 1 as well as Level 5, Level 6, Level 7, Level 8, or Level 9. Do you plan on using this/these tool(s) on every participant or a sample of the learners?

Participation by check-in, audience response system; learner competence by audience response and application to case-based presentations; self-reported change by intent to change form.

Step 7: Determining the Desired Results, Learning Objectives and Content of the CME Activity

In steps 2 and 3, the target audience and pertinent ABMS/ACGME competency were identified. Subsequent steps involved the identification of non-educational interventions and potential allies.
that could help close the identified gap(s). Step 6 involved the identification of an appropriate evaluation methodology that will be used to judge whether the activity has successfully closed the identified gap(s). In step 7, the desired results, learning objectives and content of the CME activity are determined.

Importantly, this step has been deliberately placed at this stage in the planning process. In other words, the identified gap(s) and the issues identified in previous steps should always be considered BEFORE the learning objectives and educational content are decided.

Learning objectives can be thought of as “stepping stones” that help learners understand the nature of the identified gap(s). Well thought out learning objectives also serve as a guide to instructors so that they create content that will help learners close the identified gap(s). As such, objectives should contain action verbs and criteria that help activity planners evaluate whether the gap(s) was/were closed (e.g., whether the activity helped improve competency, influence physician behavior, and/or improve patient outcomes). Moreover, planners should present the learning objectives to instructors and authors, not vice versa.

Similarly, the content should reflect the premises outlined in the learning objectives. In turn, the content should be dictated by the need to close the identified gap(s). In other words, CME planners for your department should direct instructors to address the need(s) identified in step 1 (i.e., the cause that is responsible for the gap in optimal care). Faculty may be actively involved in the process of content creation; however, they should never lose sight of what the planners are trying to achieve (i.e., helping the learners close the identified gap by addressing the need to improve knowledge, enhance competence, influence behavior, and/or improve patient outcomes).

In addition, the creation of CME content must strictly adhere to all pertinent ACCME Essential Areas and the Standards for Commercial Support. To that end, GHS only sponsors CME activities that promote improvements or quality in healthcare and not the proprietary interests of any commercial organization. All relevant financial relationships with commercial interests must be disclosed to the GHS - CME department so that methods to resolve any conflicts of interest may be implemented prior to the CME activity taking place. Further, the management of any commercial support must strictly adhere to the Standards for Commercial Support. In all cases, education is separated from promotion. Disclosure to the learners of relevant financial relationships and any commercial support of the activity must also occur.

**Step #7**

A. Based on the identified gap(s) as well as the cause for the gap that you discovered through the needs assessment analysis, what are the desired results of the CME activity? Based on this answer, what is the content you want to cover?

From the identified gaps, we are planning an update in primary care program that will meet the goals of recognition of common and uncommon presentations for conditions encountered in primary care, approaches to diagnosis and treatment of common medical conditions, recognition of personal strengths and weaknesses in healthcare delivery.
### B. Based on the identified gap(s) and the desired result(s), what is/are the activity objective(s)?

See above. Each session has separate objectives to be listed.

Current practice guidelines and theories related to several areas of internal medicine including general medicine, hematology/oncology, cardiology, radiology, pulmonology, critical care medicine, infectious diseases, endocrinology, gastroenterology. Will have an invited speaker (The Hayes Lecturer) who will provide insight into other aspects of medical care.

### C. How does the content relate to the current or potential scope of practice of the physician target audience?

These are identified needs by previous participants, gaps in regional and national care based on standards, identified gaps and needs from review of topics and goals of similar updating events that are highly regarded established programs.

### Step 8: Selecting the Appropriate Educational Methodology

Importantly, the educational methodology should reflect the gap(s) identified in step 1, the evaluation methodology chosen in step 6, as well as the desired results, learning objectives, and the content chosen in step 7. Whenever possible, adult learning principles (as well as the physician learning and change process) should be taken into account when selecting appropriate educational methodology.

### A. Based on the previous steps, what is/are the right educational format(s) to use for the activity? What type of activity will it be (i.e., live activity, enduring material, internet, performance improvement, internet point of care, etc.)? Why?

These are live activities at a 1-day symposium. Throughout the day, we will use formats to include lecture/didactic, case-based application, audience response, and other active adult learning methods.

### B. What will be the educational design of the activity (e.g., presentation, case-based, round table, simulation, etc.)? Consider adult learning principles and the identified gap(s).

Presentations, workshop demonstrations, panel discussions, visual aids, handouts.
C. Is the educational format appropriate to the setting, your objectives, and your desired result(s)?

Yes

D. How do the educational format/methodology and design components of the CME activity support the desired results and learning objectives outlined in step 7?

Topics designed to specifically address identified needs via all data previously described. Also, there is a summative evaluative process through the aforementioned measures at the end of the program.

Step 9: Selecting Speakers

Speakers should be selected only after the content has been chosen and the educational methodology has been determined. You should select speakers that are best prepared to teach the activity that you have planned, not vice versa. Criteria to consider when instructors are selected might include the following: demonstrated expertise in the content area selected; ability to communicate effectively with the target audience; and willingness to meet the educational needs that the planning committee has identified. In the end, speaker should understand what the purpose of the CME activity is (i.e., to improve competence, influence behavior, and/or to improve patient outcomes). Please note: All speakers are required to complete CME documentation. All external speakers must complete an entire CME package. Please contact the CME Coordinator to make arrangements to collect all the necessary paperwork for your speakers. The CME department will not award CME credit for any activities that fail to complete all the appropriate CME forms prior to the event.

Step #9

Who are the right faculty to cover this content? Do you want them to focus on transfer of information (i.e., lectures and monographs), techniques to overcome gaps in competence (e.g., algorithms and case-based discussions), or strategies to overcome system problems (e.g., guidelines, policies, and toolkits)?

The faculty are identified as leaders in the areas to be addressed. They do focus on all the techniques described including transfer of information, techniques to overcome gaps in competence, strategies to overcome system problems.

Revised August 1, 2014
Step 10: Describe your CME activity

The final step is to simply describe, in your own words, what you envision for your CME activity.

The purpose of the Lloyd Hayes Symposium is to provide an update of topics relevant to primary care providers. It will be a 1-day symposium on Saturday which is conducted in conjunction with an annual alumni weekend for the Medicine Residency Program.

(see attached detailed agenda):

Thank you for your diligence in planning a CME activity of excellence. Your work is greatly appreciated by Greenville Health System and the Continuing Medical Education Department.

The following items must be attached to this application in order to be submitted for approval:

☐ Complete and attach: Copies of all Planning Committee Member CV

☐ Copies of all speaker CV/Bios

☐ Copies of Planning Committee Member disclosure forms

☐ Copies of two sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc).

☐ A copy of the rough draft of the agenda (including introduction time, breaks, etc.)

☐ A copy of the tentative budget typed up.

In addition, one person must be identified as a person of contact for the CME Department to make initial contact. Also, this identified person will be responsible for ensuring all required paperwork has been turned in to the CME Department. Please list the name and phone number of this individual: ________________________________________________________________.

Revised August 1, 2014
Medical Director responsible for activity: Please check to see that all required attachments (listed above) are included with this completed application form.
If all the attachments are included:

Please Sign Here: __________________________________________________

List the Planning Committee members and their respective institutional affiliation:

Each member of the Planning Committee, including the Facilitator must complete an annual CME Disclosure Form. Please send (scanned or electronic document preferred) the completed CME Disclosure Form to the Continuing Medical Education office as part of this application.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institutional Affiliation</th>
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Please allow up to 1 month for approval of your CME activity.

If you have any questions, please feel free to contact:

Rachel Crowell – CME Coordinator
Greenville Health System
701 Grove Road
Greenville, South Carolina 29605
(864) 455-6478

Sally Cade – CME Coordinator
Greenville Health System
701 Grove Road
Greenville, South Carolina 29605
(864) 455-3552
scade@ghs.org

Revised August 1, 2014
TARGET AUDIENCE

This is a clinically focused program designed for primary care health providers interested in the diagnosis and management of clinical problems encountered in primary care. This would include family physicians, general practitioners, internists, physician assistants, nurse practitioners, and other health care professionals involved in primary care.

PROGRAM OBJECTIVES

The objective of this course is to update primary care providers in their current thinking about various diagnostic and therapeutic challenges commonly encountered in clinical practice.

At the conclusion of this course, participants will be able to implement:

- a better understanding of pulmonary function tests.
- the latest updates in resistant hypertension.
- how to diagnose and manage sarcoidosis.
- knowledge of hepatitis-C screening.
- advances in contraception.
- standard approach to low-T.
- evidence-based evaluation of chronic cough.
- treatment options for tick-borne illnesses.
- proper use of new anticoagulants.
- select drug treatment options for Type 2 diabetes.
PROGRAM SCHEDULE

Friday, July 29, 2016

7:45 am  Continental Breakfast & Registration
8:15    Welcome and Announcements  | James Froehlich, MD, MPH
8:20    New Anticoagulants: How to Start, Stop, and Reverse  | James Froehlich, MD, MPH
9:00    Your Patient is Going to the OR: Some Things Old and New  | Kevin Tremper, MD, PhD
9:35    The Right Vaccines for the Right Patients: Approaches to Mythbusting  | Daniel Kaul, MD
10:10   Break
10:25   Hepatitis C: Whom to Screen and Whom to Treat?  | John Carethers, MD
11:05   Low T: Fact, Fiction, and Your Patients  | Robert Lash, MD
11:40   Menopause: Fact and Fiction  | Amy Tremper, MD
12:15 pm  Session Adjourns
12:30 - 2:00  Lunch on the Lawn & Children’s Games, Tea Garden
   (Alt: Grand Luncheon Buffet, Main Dining Room)

Saturday, July 30, 2016

7:45 am  Continental Breakfast & Registration
         (for those who have not already)
8:15    Announcements  | James Froehlich, MD, MPH
8:20    Peripheral Arterial Disease for the Primary Care Provider  | James Froehlich, MD, MPH
9:00    What the Primary Care Provider Needs to Know About Tick-Borne Illnesses  | Daniel Kaul, MD
9:40    The Finer Points of Interpreting Pulmonary Function Tests  | Eric White, MD
10:20   Break
10:35   Hyperaldosteronism: More Common Than We Think?  | Robert Lash, MD
11:10   Your Microbiome and You  | John Carethers, MD
11:50   What the PCP Needs to Know about Sarcoidosis and Interstitial Lung Disease  | Eric White, MD
12:30 pm  Session Adjourns
6:00 - 7:00  Private Reception, Front Porch
   (Alt: Terrace Room)

Sunday, July 31, 2016

7:45 am  Continental Breakfast & Registration
         (for those who have not already)
8:15    Announcements  | James Froehlich, MD, MPH
8:20    Racial Differences in Colon Cancer: Implications for Diagnosis and Treatment  | John Carethers, MD
9:00    Updates on Contraception  | Amy Tremper, MD
9:40    Decreasing Complications in Diabetes: Are SGLT-2 Inhibitors the Answer?  | Robert Lash, MD
10:20   Break
10:35   Zika Virus: The Known Knowns, and Unknown Unknowns  | Daniel Kaul, MD
11:10   Evaluation and Treatment of Chronic Cough  | Eric White, MD
11:50   What is Resistant Hypertension? How Do I Manage It?  | James Froehlich, MD, MPH
12:30 pm  Course Adjourns
UPCOMING CME COURSES

Updates in Nephrology for the Primary Care Provider
Saturday, May 14, 2016
The Inn at St. John’s, Plymouth, MI

Algorithms for Modern Venous Care
Saturday, May 21, 2016
The Inn at St. John’s, Plymouth, MI

Update on Arrhythmias & Syncope
Saturday, June 11, 2016
The Inn at St. John’s, Plymouth, MI

NEW IN 2016!

Internal Medicine Certification & Recertification Board Review
Monday - Friday, July 11-15, 2016
The Inn at St. John’s, Plymouth, MI

Maintenance of Certification (MOC) Study Sessions
Saturday, July 16, 2016
The Inn at St. John’s, Plymouth, MI

29th Annual Cardiology Update
Friday - Sunday, July 29-31, 2016
Grand Hotel, Mackinac Island, MI

29th Annual Pediatric Board Review
Sunday - Friday, August 21-26, 2016
The Kensington Hotel, Ann Arbor, MI

Clinical Issues in the Care of Older Adults
Thursday, September 29, 2016
The Kensington Hotel, Ann Arbor, MI

Gastroenterology Update: A Case-Based Approach to Common GI Problems
Friday - Saturday, October 7-8, 2016
The Dearborn Inn, Dearborn, MI

29th Annual Update in Pulmonary & Critical Care Medicine
Friday - Saturday, November 11-12, 2016
The Dearborn Inn, Dearborn, MI

19th Annual Liver Disease Wrap-Up
Saturday, December 10, 2016
The Inn at St. John’s, Plymouth, MI

University of Michigan Faculty

John Carethers, MD
John G. Searle Professor,
Chair, Department of Internal Medicine,
Division of Gastroenterology

James Froehlich, MD, MPH
Course Director
Professor,
Department of Internal Medicine,
Division of Cardiology
Director, Vascular Medicine
Director, Anticoagulation Clinic

Daniel Kaul, MD
Associate Professor,
Department of Internal Medicine,
Division of Infectious Diseases
Director, Transplant Infectious Disease Service
Program Director,
Infectious Disease Fellowship Program

Robert Lash, MD
Professor,
Department of Internal Medicine,
Division of Metabolism,
Endocrinology, and Diabetes
Chief of Staff, U-M Health System
Director, Clinical Foundations of Medicine

Amy Tremper, MD
Assistant Professor,
Department of Obstetrics and Gynecology

Kevin Tremper, MD, PhD
Robert B. Sweet Professor,
Chair, Department of Anesthesiology

Eric White, MD
Associate Professor,
Department of Internal Medicine,
Medical Director,
Pulmonary and Critical Care Medicine Clinics
Medical Director,
Ambulatory Diagnostic and Treatment Unit

Planning Committee

James Froehlich, MD, MPH
Course Director
Professor,
Department of Internal Medicine,
Division of Cardiology
Director, Vascular Medicine
Director, Anticoagulation Clinic

Jennifer Goodwine
Program Coordinator,
Department of Internal Medicine
Continuing Medical Education

Allison Picinotti
Program Manager,
Department of Internal Medicine
Continuing Medical Education

Katie Ursitti
Program Coordinator,
Department of Internal Medicine
Continuing Medical Education

GRAND HOTEL, MACKINAC ISLAND, MICHIGAN

AMERICA’S SUMMER PLACE. A GRAND EXPERIENCE.

Named US News and World Report’s 2016 Best Hotel in Michigan, one of Travel + Leisure’s 500 World’s Best Hotels, and Condé Nast Traveler’s Top 5 Midwest Resorts, Grand Hotel offers an unmatched vacation experience. Your stay in one of the 390 uniquely decorated guest rooms includes a full breakfast and five-course dinner.

Mackinac Island itself offers many ways to unwind and explore. Guests can rent bikes, hike the island’s interior, tour historic Fort Mackinac or take a horse-drawn carriage ride. There are also two butterfly houses and the Richard and Jane Manoogian Mackinac Art Museum, which showcases island-inspired art. And no island visitor can leave without sampling some of the world’s best fudge – 12 shops island-wide in all – including Grand Hotel’s own signature confectionery.
COURSE FEE
The course fee includes educational materials, continental breakfast, coffee service, Lunch on the Lawn, and private reception for participants, faculty and families. Please RSVP for the Lunch on the Lawn and the Welcome Reception on the course registration form.

VENUE
Grand Hotel, Mackinac Island, Michigan. Hotel reservations must be made by mail or fax (see Lodging) using the Grand Hotel Reservation Form on the next page. Reservation Deadline: Tuesday, June 28, 2016. Phone: (800) 334-7263 or visit www.grandhotel.com

REGISTRATION
You are encouraged to register as soon as you are certain of attending, as we cannot guarantee educational materials for applicants who are not preregistered and prepaid by Friday, July 15, 2016. Payment must be received at time of registration.

CONFIRMATION
Conference registrations will be confirmed by email. If you do not receive confirmation, or if the information is in question, contact the Department of Internal Medicine CME Office at (734) 232-3469 or email intmedcme@umich.edu.

CANCELLATION POLICY
An administrative fee of $50 will be deducted from your registration payment. Refund requests must be received in writing one week prior to the course, no later than Thursday, July 21, 2016. No refunds will be made thereafter.

ACCREDITATION
The University of Michigan Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The University of Michigan Medical School designates this live activity for a maximum of 12 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Applications have been submitted to the American Osteopathic Association and the American Academy of Family Physicians for credits. Determination of credit is pending. Other credits by specialty may apply.

COURSE SYLLABUS
A printed syllabus is guaranteed for all those who register on or before Friday, July 15, 2016. In addition, an electronic syllabus will be available to download during and a week after the course. The URL will be provided at the course.

LODGING
Grand Hotel reservation deadline is Tuesday, June 28, 2016. Please Note: The reservation form in this brochure must be used. To arrange for accommodations, please complete the Hotel Reservation Form and return it to: Reservations Department: Grand Hotel, PO Box 286, Mackinac Island, Michigan 49757 or fax to (906) 847-0945 by Tuesday, June 28, 2016. See the Hotel Reservation Form for room guarantees. Lodging rates at the Grand Hotel are based on the Modified American Plan – breakfast and dinner are included. For additional Grand Hotel questions, please contact Grand Hotel at (800) 334-7263 or visit www.grandhotel.com

GUEST ATTIRE
Casual resort wear is welcome anywhere in Grand Hotel throughout the day. However, in accordance with Grand Hotel tradition, a dress code is in effect after 6:30 pm. Dress, skirt and blouse or pantsuit for ladies, and coat, necktie and dress pants for gentlemen are required for the enjoyment of hotel activities. Less formal dining areas are available at an additional charge to guests at Woods, The Jockey Club at the Grand Stand, The Gate House, Sushi Grand, or Cawthorne’s Village Inn downtown.

ADDITIONAL NEARBY ACCOMMODATIONS
Hotel Iroquois 906-847-3321
Island House Hotel 906-847-3347
Mission Point Resort 906-847-3000

For additional information on other hotels, please call the Mackinac Island Tourism Bureau at 800-4LILACS or visit www.mackinacisland.org

TRANSPORTATION
Motor vehicles are prohibited on the island and all travel is by carriage, bicycle, horseback or foot. Mackinaw City and St. Ignace are easily accessible by car. Transportation is available from either location to Mackinac Island by ferry or charter flight to the Island’s airstrip. Discount ferry coupons for transportation to Mackinac Island will be emailed several weeks prior to the course. Pellston Regional Airport serves Mackinaw City and is located 16 miles south off I-75. You must pre-arrange your ground transportation to Mackinaw City.

CONTACT INFORMATION
University of Michigan Department of Internal Medicine - Continuing Medical Education
Phone: (734) 232-3469
Fax: (734) 998-0085
Email: intmedcme@umich.edu
Web: www.med.umich.edu/intmed/cme
Grand Hotel Reservation Form

U-M 34th ANNUAL INTERNAL MEDICINE UPDATE - JULY 29 - 31, 2016


ACCOMMODATIONS MAY BE AVAILABLE PRIOR TO AND FOLLOWING THE ABOVE DATES

Return this form to Grand Hotel

Mail: Reservations Department, Grand Hotel, PO Box 286, Mackinac Island, MI 49757
Fax: (906) 847-0945
Hotel Reservation Deadline: Tuesday, June 28, 2016

☐ Dr.    ☐ Mr.    ☐ Mrs.    ☐ Ms.    ☐ Mr. & Mrs.

Name

Address

City                                      State                                      Zip

Home/Cell Phone                          Business Phone

Email address (for reservation confirmation)

If sharing a room, name(s) of person(s) sharing with you:

Grand Hotel offers a variety of room types for conference attendees. Guests sometimes ask to arrive earlier or remain later than the conference’s official dates. We welcome your request for a specific room, room type, or room dates either prior to or following the conference. While your request will receive careful attention, please understand that it cannot be guaranteed.

ARRIVAL DATE: ___________________________    DEPARTURE DATE: ___________________________

Please reserve the following accommodations:

<table>
<thead>
<tr>
<th>Category</th>
<th>Accommodation Details</th>
<th>Double - Daily, Per Person, based on Double Occupancy</th>
<th>Single - Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORY I - Smaller, interior-view rooms</td>
<td>☐ $235.00</td>
<td>☐ $395.00</td>
<td></td>
</tr>
<tr>
<td>CATEGORY II - Larger, interior-view and smaller, lake-view rooms</td>
<td>☐ $290.00</td>
<td>☐ $505.00</td>
<td></td>
</tr>
<tr>
<td>CATEGORY III - Deluxe lake-view guest rooms, some with balcony</td>
<td>☐ $370.00</td>
<td>☐ $665.00</td>
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</tbody>
</table>

Grand Hotel operates on the Modified American Plan. This means that your daily rate includes breakfast and dinner, in addition to our Grand Luncheon Buffet, other facilities are available at Grand Hotel for lunch.

RESERVATIONS FOR ADDITIONAL PERSONS

☐ 4 years of age and under, no charge, except for luggage charge
☐ 5 through 11 years of age, no charge, except for luggage charge
☐ 12 through 17 years of age, $59.00 daily, per person
☐ 18 years of age and over, $139.00 daily, per person

For an adult staying in a guest room with one or more children, the adult will pay the single convention rate, the children will be at the appropriate children’s rates listed above. For two or more children staying in a guest room without an adult, the oldest child will be charged the single convention rate based on the category of room they are in and the remaining children will be at the additional persons rates listed above.

PLEASE NOTE THAT A LIMITED NUMBER OF ROOMS ARE AVAILABLE FOR EACH RATE CATEGORY. IF THE RATE REQUESTED IS NOT AVAILABLE, THE CLOSEST AVAILABLE RATE WILL BE CONFIRMED.

NO TIPPING: Tipping to any employee anywhere within Grand Hotel is not required, expected or permitted. There is tipping at the following offsite restaurant locations: The Jockey Club at the Grand Stand, Woods, The Gate House, the Pool Grill, Cawthorne’s Village Inn, Sushi Grand, and Fort Mackinac Tea Room.

NOTE: Michigan 6% Sales Tax applies to all charges, including a 19.5% added charge on the per person daily room rate. There is also a 2% Mackinac Island Assessment charge on the per person daily room rate. There is a one-time charge of $8.00 per person for transfer of luggage from the dock to the Hotel and return. Taxi transportation to and from the boat docks and the Hotel is not included in the daily rate.

The block of rooms being held for this meeting is based on estimated attendance. Please make your reservation as promptly as possible. Requests received after the block is filled will be contacted and given an option of being placed on a waitlist. The waitlist is not a guarantee of a room. All rooms in the block which have not been reserved 30 days in advance of the meeting will be released for other guests. Individual group reservations are subject to a 10-day cancellation policy. Reservation deposits will be refunded if cancelled 10 or more days prior to arrival, less a $45.00 processing fee. Reservations cancelled less than 10 days prior will forfeit the room deposit. Once a guest confirms a departure date upon check-in, should check-out occur earlier than agreed, there will be a $400.00 charge.

DEPOSIT POLICY: A deposit, including luggage charge, must accompany this form in order to hold your room. Grand Hotel accepts VISA, MasterCard, Discover, American Express, traveler’s checks, personal checks, and cash payments for bills.

METHOD OF DEPOSIT: ☐ CHECK     ☐ CREDIT CARD: ☐ MasterCard     ☐ Discover     ☐ AmEx     ☐ VISA
☐ Please charge one full night rate to my credit card.
☐ Please charge my full stay to my credit card.

CARD NUMBER:                                                  EXP. DATE:                                                  SEC. CODE:

NAME ON CARD: (Please print)

SIGNATURE: (Not valid without signature)

CHECK-IN TIME: After 4:00 P.M.    CHECK-OUT TIME: Before 11:00 A.M. Your hotel confirmation will be arriving to you via e-mail. Please check your confirmation to make sure it is correct and print it for your records. Please contact us with any questions or changes. In accordance with Michigan law, all Grand Hotel guest rooms, meeting rooms, restaurants and bars are non-smoking. For additional information, please visit us at www.grandhotel.com
# Course Registration Form

## 34th Annual Internal Medicine Update

### July 29 - July 31, 2016

## Registration Options

- Mail this form to:
  - University of Michigan
  - Department of Internal Medicine CME
  - 24 Frank Lloyd Wright Dr.
  - Lobby J, Suite 1200
  - Ann Arbor, MI 48106-5750

- Online:
  - [www.med.umich.edu/intmed/cme](http://www.med.umich.edu/intmed/cme)

- Fax: (734) 998-0085

Please register by **Friday, July 15, 2016** to receive a printed course syllabus. On-site registration will be available.

## Course Registration Form

### 34th Annual Internal Medicine Update

#### July 29 - July 31, 2016

## Rate & Payment Information

<table>
<thead>
<tr>
<th>Course Options</th>
<th>Physician</th>
<th>Physician-in-Training, Retired Physician, RN &amp; Allied Health</th>
<th>U-M Faculty &amp; Staff</th>
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</thead>
<tbody>
<tr>
<td>Full Course</td>
<td>$730</td>
<td>$560</td>
<td>$200</td>
</tr>
<tr>
<td>One-Day Course – Friday only</td>
<td>$320</td>
<td>$250</td>
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<tr>
<td>One-Day Course – Saturday only</td>
<td>$320</td>
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<tr>
<td>One-Day Course – Sunday only</td>
<td>$320</td>
<td>$250</td>
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<tr>
<td>Total Registration Fee</td>
<td>$________</td>
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Please enclose a check (U.S. currency) payable to the [University of Michigan](http://www.med.umich.edu/intmed/cme) or pay by credit card below. Payment must accompany registration.

#### Credit Card:
- [AmEx](http://www.med.umich.edu/intmed/cme)
- [Discover](http://www.med.umich.edu/intmed/cme)
- [MasterCard](http://www.med.umich.edu/intmed/cme)
- [Visa](http://www.med.umich.edu/intmed/cme)

#### Card #

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<th>Exp. Date</th>
<th>Sec. Code</th>
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#### Name on Card (Please print)

#### Signature (Not valid without signature)
The goal of this course is to provide a comprehensive, intensive and evidence-based update in Internal Medicine across all its subspecialties, with the objective of improving the knowledge, skills and competencies of primary care and subspecialist physicians and allied health professionals across a wide-range of clinical settings. We strive to make this a clinically-relevant course, with didactic lectures, case-based presentations and question and answer sessions with distinguished faculty all designed to engage and enhance the learning environment for course participants in order to improve patient management.

We include a broad range of topics across all medical subspecialties and relevant additional specialties (such as Neurology, Psychiatry and others) and aim to enhance the participant’s ability to navigate the diagnosis and management of numerous illnesses with a focus on recent developments in each field. As part of our course, we also include a live New England Journal of Medicine Clinico-pathological Conference (CPC) which encompasses a multidisciplinary discussion of a complex medical case.

Offered By

Course Director
Rocío M. Hurtado, MD, DTM & H

Co-Directors
Vijay Yajnik, MD, PhD
Katrina Armstrong, MD

Course Administrator
Mariane Ross
The goal of this course is to provide a comprehensive, intensive and evidence-based update in Internal Medicine across all its subspecialties, with the objective of improving the knowledge, skills and competencies of primary care and subspecialist physicians and allied health professionals across a wide-range of clinical settings. We strive to make this a clinically-relevant course, with didactic lectures, case-based presentations and question and answer sessions with distinguished faculty all designed to engage and enhance the learning environment for course participants in order to improve patient management.

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**Learning Objectives**

Upon completion of this activity, participants will be able to:

- Improve the knowledge, clinical skills and performance of practicing clinicians in Internal Medicine
- Apply updated and evidence-based strategies in diagnosis and management of clinically-relevant disorders across Internal Medicine
- Incorporate new clinical and translational research findings across Internal Medicine and its subspecialties into more effective approaches in medical management

**Target Audience**

This course is targeted to Physicians, Physician Assistants, and Nurse Practitioners. This course may also be of interest to specialty physicians who practice in Cardiology/Vascular Medicine, Critical Care & Trauma, Emergency Medicine, Endocrinology, Family Medicine, Gastroenterology, Geriatrics, Infectious Diseases, Internal Medicine, Nephrology, Oncology & Hematology, Palliative Medicine, or Pulmonary Medicine/Rheumatology.

**ACGME Competencies**

The course is designed to meet the following Accreditation Council of Graduate Medical Educational competencies:

- Patient Care
- Medical Knowledge
### 2016 Lloyd Hayes Symposium

**Saturday, August 27, 2016**

**Balance Sheet**

<table>
<thead>
<tr>
<th><strong>Debits/Expenses</strong></th>
<th><strong>Credits/Registrations and Exhibitors Fees</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Venue</strong></td>
<td><strong>2015 Ending Balance</strong> $0.00</td>
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<tr>
<td>Meeting Space</td>
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<td>Audio Visual Supplies</td>
<td><strong>Registration Fees (Net)</strong></td>
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<tr>
<td>Service Charges</td>
<td>Registrations @ $150.00 $6,000.00</td>
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<tr>
<td>Taxes</td>
<td><strong>Exhibitor Fees</strong></td>
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<tr>
<td><strong>Catering</strong></td>
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<td>Reeves Catering</td>
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<td>Reeves Catering (Drinks)</td>
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<tr>
<td><strong>Decorations</strong></td>
<td><strong>Recoupment of Deficit</strong></td>
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<td>Centerpieces</td>
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<td><strong>Speakers</strong></td>
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<tr>
<td>Speaker Gifts</td>
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<td><strong>Marketing</strong></td>
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<tr>
<td>Printing</td>
<td><em>Outstanding Balance</em>* -$1,050.00</td>
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<tr>
<td>Syllabus Placed on CME Website</td>
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<tr>
<td>Posters</td>
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<tr>
<td><strong>CME Recovery Fee</strong></td>
<td><strong>Total Debits</strong> $9,050.00</td>
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<tr>
<td>$300 x 7.00 CME hours</td>
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</tbody>
</table>

*Total Debits $9,050.00

*If outstanding balance is positive, this amount will be carried over to offset expenses for next year's event; however, if the outstanding balance is negative, this amount will need to be recouped from the department.*
JAMES MICHAEL FULLER, MD, FCCP
Pulmonary Disease Associates
701 Grove Road
5th Floor Academic Tower
Greenville, SC 29605
(864) 455-8973

EDUCATION

College
University of Richmond, Richmond, Virginia
B.S., Chemistry, May 1986, Summa Cum Laude

Medical School
Medical College of Virginia, Richmond, Virginia
M.D., May 1990

Residency
Vanderbilt University Medical Center, Nashville, Tennessee
Internal Medicine, 1990-1993

Fellowship
University of Alabama at Birmingham, Birmingham, Alabama
Pulmonary/Critical Care Medicine, 1993-1996

Added Qualifications
Masters of Medical Education in Curriculum and Instruction,
University of Cincinnati, Cincinnati, OH, August 2015
Thesis: “Improving Attitudes and Behaviors towards Internal Medicine Grand Rounds by Incorporating the Theory of Planned Behavior”

EMPLOYMENT

Pulmonary Disease Associates, University of South Carolina School of Medicine, Greenville Hospital System, Greenville, South Carolina, 2004-present

Piedmont Pulmonary Consultants, Hickory, North Carolina, 1999-2004

Coastal Respiratory Associates, Savannah, Georgia, 1997-1999

The Heart and Lung Group of Savannah, Savannah, Georgia, 1996-1997
**LICENSURE**

South Carolina 18522  
North Carolina 990500 *(inactive)*  
Georgia 041799 *(inactive)*  
Alabama 17423 *(inactive)*  
Tennessee 022122 *(inactive)*

**BOARD CERTIFICATION**

Diplomate, American Board of Internal Medicine (#148023)  
Internal Medicine, 1993; Recertified, 2009  
Pulmonary Diseases, 1997; Recertified, 2007  
Critical Care Medicine, 1998; Recertified, 2008

**HOSPITAL STAFF APPOINTMENTS**

Greenville Hospital System, Greenville, South Carolina, 2004-present  
Frye Regional Medical Center, Hickory, North Carolina, 1999-2004  
Catawba Valley Medical Center, Hickory, North Carolina, 1999-2004  
Liberty Regional Medical Center, Hinesville, Georgia, 1997-1999  
Candler General Hospital, Savannah, Georgia, 1996-1999  
Memorial Medical Center, Savannah, Georgia, 1996-1999  
St. Joseph’s Hospital, Savannah, Georgia, 1996-1999
ACADEMIC APPOINTMENTS AND ACTIVITIES

Associate Professor of Medicine, University of South Carolina School of Medicine, 2008-present
Assistant Professor of Medicine, University of South Carolina School of Medicine, 2004-2008
Vice Chairman—Academics, Department of Medicine, Greenville Health System, 2007-present
Program Director, Internal Medicine Residency Program Greenville Health System, 2011-present
Associate Program Director, Internal Medicine Residency Program, Greenville Hospital System, 2007-2011
Assistant Dean for Faculty Development, University of South Carolina School of Medicine Greenville, 2007-present
Academic Council, Greenville Health System, 2013-present
Academic Council Patient Safety/Quality Subcommittee, Greenville Health System, 2013-present
Academic Council Educational Resources Subcommittee, Greenville Health System, 2015-present
Shared Academic Health Center Planning Committee, Greenville Health System, 2015-present
LCME Site Visit Subcommittee, University of South Carolina School of Medicine Greenville, 2013-present
Longitudinal Clinical Education Committee, University of South Carolina School of Medicine Greenville, 2014-present
GME Strategic Planning Task Force, Greenville Health System, 2013-present
Program Evaluation and Assessment Committee, University of South Carolina School of Medicine Greenville, 2013-present
Admissions Committee, University of South Carolina School of Medicine Greenville, 2011-present
Appointments and Promotion Committee, University of South Carolina School of Medicine Greenville, 2010-2015
Faculty Development Committee, University of South Carolina School of Medicine Greenville, 2012-present (Chair, 2012-present)
Scholar, Institute for the Advancement of Healthcare, Greenville Hospital System, 2012-present
Medicine and Society Curriculum Committee, University of South Carolina School of Medicine Greenville, 2011-present
Clinical Diagnosis and Reasoning Curriculum Committee, University of South Carolina School of Medicine Greenville, 2011-present
Academic Transformation Council, University of South Carolina School of Medicine Greenville, 2011-present
ACADEMIC APPOINTMENTS AND ACTIVITIES (CONTINUED)

Center for Teaching and Learning, University of South Carolina School of Medicine Greenville, 2011-present
Internal Reviewer, Sports Medicine Fellowship Program, Greenville Health System, 2013
Operational Task Force-USC School of Medicine-Greenville, 2010-2012
Co-Chair, Curriculum Committee, USC School of Medicine-Greenville, 2010
Co-Director, History of Medicine Course, Internal Medicine Residency Program, Greenville Health System, 2007-present
Strategic Planning, Programmatic and Implementation Team, USC/GHS Academic Health System, 2008-present
Workforce Development Team, USC/GHS Academic Health System, 2008-present
Internal Reviewer, Medicine-Pediatrics Residency Program, Greenville Hospital System, 2008
Internal Reviewer, Surgical Residency Program, Greenville Hospital System, 2007
Key Clinical Faculty, Internal Medicine Residency Program, Greenville Hospital System, 2006-2007
Sub-Specialty Education Coordinator, Internal Medicine Residency Program, Greenville Hospital System, 2006-2011
Director, CXR Interpretation Course, Internal Medicine Residency Program, Greenville Health System, 2006-present
Director, Clinical Pathology Conference, Internal Medicine Residency Program, Greenville Health System, 2006-present
Director, CXR Interpretation Course, USC Medical Students, Greenville Health System, 2005-present
Program Chair, Medical Education Day, Greenville Health System, 2008-present
Coordinator, Internal Medicine Alumni Association and Reunion Weekend, Greenville Health System, 2008-present
Program Chair, Lloyd E. Hayes Symposium, Greenville, SC, 2008-present
HOSPITAL STAFF ACTIVITIES

Workforce Development Steering Committee, Greenville Health System, 2013-present
GHS Quality Task Force, Greenville, SC, 2013
Central Line Associated Blood Stream Infection Elimination Task Force, Greenville Health System, Greenville, SC, 2010-present
Physician Leadership Academy, Greenville Health System, 2007-present
Integrative Medicine Committee, Greenville Health System, 2011-present
Chair, Finance Committee, Greenville Health System, Division of Pulmonary, Critical Care, and Sleep Disorder Medicine, 2004-2014
Vice-Chief, Pulmonary Division, Greenville Hospital System, 2006-2008
Medical Staff Performance Improvement Committee, Greenville Hospital System, 2005-2008
Chief Medical Officer, LTACH, Greenville Hospital System, 2004-2011
Co-Director, Interventional Pulmonology Program, Greenville Health System, 2004-present
Advisory Board, SC Lung Association, 2004-2005
Chair, Utilization Review and Documentation Integrity Committee, Greenville Health System, 2004-present
Medical Preceptor, External Doctor of Pharmacy Program, UNC-Chapel Hill, 2004
Secretary of the Medical Staff, Catawba Valley Medical Center, 2004
Quality Control Committee, Catawba Valley Medical Center, 2004
Performance Awareness Committee, Catawba Valley Medical Center, 2004
Medical Consultant, Respiratory Therapy Services, Catawba Valley Medical Center, 2003-2004
Critical Care Committee, Catawba Valley Medical Center, 2003-2004
Chief of Medicine, Catawba Valley Medical Center, 2002-2003
Medical Executive Committee, Catawba Valley Medical Center, 2002-2004
Vice-Chief of Medicine, Catawba Valley Medical Center, 2001-2002
Special Care Committee, Frye Regional Medical Center, 2001-2004
Chairman, 2001-2004
Quality Management Committee, Frye Regional Medical Center, 2001-2004
Infection Control Committee, Catawba Valley Medical Center, 2001-2002
Medical Director, Camp Air Adventure Asthma Camp, 2001-2004
Pulmonary Advisory Board, Frye Regional Medical Center, 2000-2004
Chairman, 2000-2004
Nutrition Support Committee, Frye Regional Medical Center, 2000-2004
Peer Review Committee, Catawba Valley Medical Center, 2000-2001
Cancer Committee, St. Joseph’s/Candler Hospital, 1998-1999
HOSPITAL STAFF ACTIVITIES (CONTINUED)

Joint Pharmacy and Therapeutics Committee, St. Joseph's/Candler Hospital, 1998-1999
Medical Director, Candler Hospital/Emory University's Severe Lung Disease and Transplantation Program, 1996-1999
Pulmonary Advisory Board, St. Joseph’s/Candler Hospital, 1996-1999
Critical Care Committee, St. Joseph’s/Candler Hospital, 1996-1999

PROFESSIONAL ORGANIZATIONS

American College of Physicians (by direct invited election, an honor conferred upon only a few outstanding physicians each year based upon status as an academician or researcher with a national reputation, extensive publications, and an outstanding career)
American College of Chest Physicians
Society of Critical Care Medicine
American Association for Bronchology
American Thoracic Society
American Medical Association
American College of Physician Executives
American College of Healthcare Executives
Association of Program Directors in Internal Medicine
American Osler Society
William B. Bean Student Research Award Committee, 2011-present
American Journal of Medicine, Reviewer
MedStudy Internal Medicine Board Review Core Curriculum, Section Editor Pulmonary Diseases, 15th edition, 16th edition
EXTRACURRICULAR ACTIVITIES

Intramural Basketball Coach, 2011
Program Chair, Medical College of Virginia 20th Year Class Reunion, Richmond, VA, 2010
South Carolina State Board of Medical Examiners, Respiratory Care Committee, 2007-2011
Advisory Partner, Answering the Call Missionary Organization, 2007-present
Short-Term Medical Missionary, Panama, 1998
Deacon, Southside Baptist Church, Savannah, Georgia, 1998-1999
Vice-President Adult Choir, Shades Mountain Baptist Church, Birmingham, Alabama, 1995-1996
Director, 1994-1995
Richmond College Honor Council, 1983-1986
Chairman, 1985-1986
Student Executive Committee, University of Richmond, 1985-1986
Christian Medical and Dental Society, 1986-present

RESEARCH INTERESTS

Basic Science: Hyperoxic lung injury/acute and chronic lung injury
Clinical Science: Interventional pulmonology
Asthma
Sepsis/ARDS
End-stage therapies for pulmonary disease
Non-invasive ventilatory techniques
Educational: Faculty Development
Curriculum Development
Adult Learning Theories
History of Medicine
HONORS

University of Richmond senior award for four years of excellence in scholarship and leadership, 1986

University of Richmond Chemistry Department junior and senior awards, 1985, 1986

University of Richmond President’s Scholarship, 1983-1986

Phi Beta Kappa, 1985

Omicron Delta Kappa, 1986

Gamma Sigma Epsilon Chemistry Honor Society, 1985

Eta Sigma Phi Latin/Greek Honor Society, 1984

Theta Alpha Kappa Religious Studies Honor Society, 1986

Medical College of Virginia Dean’s Book Award, 1988

Alpha Omega Alpha, 1989

National Dean’s List, 1989

National Student Government Award, 1989

Phi Kappa Phi, 1990

Sigma Zeta, 1990

American Federation for Clinical Research Trainee Award, 1996

BEACON Award (Chairman’s Award for Faculty Excellence), Greenville Hospital System, 2008

Outstanding Faculty Teaching Award, 2009

SELECTED PRESENTATIONS-REGIONAL/ NATIONAL

Pulmonary Grand Rounds, “Non-invasive ventilation for acute COPD Exacerbations,” University of Alabama at Birmingham, AL, 4/28/94

Asthma - A Course for Nurses, Birmingham, AL, 6/4/94

Medical Grand Rounds, “Non-invasive ventilation,” Guntersville-Arab Medical Center, Guntersville, AL, 6/21/94

Pulmonary Grand Rounds, “Management of persistent thoracic air leaks,” University of Alabama at Birmingham, AL, 2/16/95

Advanced Pulmonary/Critical Care Medicine, “ARDS” and “Pneumonia,” University of Alabama at Birmingham, AL, 7/16/95

Pulmonary Grand Rounds, “Thoracoscopy,” University of Alabama at Birmingham, AL, 11/9/95


Respiratory Update, “Sepsis – the search for new treatments,” Wynfrey Hotel, Birmingham, AL, 3/12/96


Medical Grand Rounds, “ARDS and sepsis – new strategies for treatment,” Memorial Medical Center, Savannah, GA, 10-11-96


Great American Smokeout, “Tobacco cessation,” Frye Regional Medical Center, Hickory, NC, 11/14/00
SELECTED PRESENTATIONS-REGIONAL/NATIONAL
(CONTINUED)

Nursing Honor Society Annual Meeting, “Tobacco cessation,” AHEC, Catawba Valley Medical Center, Hickory, NC, 3/15/01

AACN Foothills Chapter Annual Meeting, “Bronchoscopy,” Holiday Inn Select, Hickory, NC, 5/3/01

Great American Smokeout, “Effects of tobacco,” Frye Regional Medical Center, Hickory, NC, 11/15/01

Unifour Physician Assistant Society, “Asthma in the ambulatory setting,” Rock Barn Country Club, Hickory, NC, 1/17/02

Catawba Valley Community College RT Graduation Speaker, Hickory, NC 4/26/02

RN CME, “Bronchoscopy,” Frye Regional Medical Center, Hickory, NC, 10/24/02

Great American Smokeout, “Breathe a little easier,” Frye Regional Medical Center, Hickory, NC, 11/21/02

Better Breathers Club, “COPD,” Frye Regional Medical Center, Hickory, NC, 2/11/03

High Country Conference on Respiratory Care, “Asthma in the Emergency Department,” Boone, NC, 2/14/03

Catawba Valley Community College RT Graduation Speaker, Hickory, NC 5/2/03

RN CME, “Mechanical Ventilation,” Frye Regional Medical Center, Hickory, NC, 1/6/04 – 1/7/04

High Country Conference on Respiratory Care, “Diagnostic and Interventional Bronchoscopy,” Boone, NC, 2/13/04

Catawba Valley Community College RT Graduation Speaker, Hickory, NC 4/30/04
SELECTED PRESENTATIONS-REGIONAL/NATIONAL
(CONTINUED)

Second Wind Better Breathers Club, Greenville Hospital System, Greenville, SC, 6/21/04

SCHIMA Regional Roundtable, “Respiratory Illnesses,” 2005

SCSRC Convention, “Advanced diagnostic and interventional bronchoscopy,” Myrtle Beach, SC, 9/9/05

SCHIMA Regional Roundtable, “Bronchoscopy,” 2006


SCHIMA Annual Convention, “The History of Medicine,” Greenville, SC, 7/19/07

Lloyd E. Hayes Symposium, “Meningococcemia,” Greenville, SC, 9/27/08

Clemson University, “Creative Healers: Lives that Shaped Today’s Medicine,” Clemson, SC, 2/25/09

American Osler Society, “John Jacob Abel-A Profile in the Heart of Medicine,” Cleveland, OH, 4/21/09

Association of Program Directors in Internal Medicine, “Workshop: Faculty Development for Community-Based Academic Medical Centers,” Dallas, TX, 4/28/09

Lloyd E. Hayes Symposium, “Acute Intermittent Porphyria,” Greenville, SC, 9/19/09

Clemson University, “Pulmonary and Critical Care Medicine,” Clemson, SC, 10/28/09

American Osler Society, “Hunter Holmes McGuire-Stonewall Jackson’s Surgeon and Icon of Virginia’s First Family of Medicine,” Rochester, MN, 4/28/10
SELECTED PRESENTATIONS-REGIONAL/ NATIONAL
(CONTINUED)

The Ninth National Quality Colloquium, “A Patient Centered Critical Care Service Design Improves Learning Environment and Quality Outcomes,” Boston, MA, 8/19/10

Lloyd E. Hayes Symposium, “Top 10 Medical Breakthroughs in 2010,” Greenville, SC, 8/28/10

Lloyd E. Hayes Symposium, “Primary Intrathoracic Thyroid,” Greenville, SC, 8/28/10

Medical Grand Rounds, “Community-acquired and Healthcare-associated Pneumonia,” Palmetto Baptist Easley Hospital, Easley, SC, 9/15/10

Institute for Healthcare Improvement, “Improved Education and Quality Outcomes in the ICU,” Orlando, FL, 12/5/10


Upcountry History Museum, “Creative Healers,” Greenville, SC, 10/18/11

SCHIMA Regional Roundtable, “A New Medical School in Greenville,” Greenville, SC, 3/30/12


MedStudy Board Certification Review Course, “Pulmonary Medicine and Pulmonary Function Testing,” Dallas, TX, 3/7/13


SELECTED PRESENTATIONS-REGIONAL/ NATIONAL
(CONTINUED)

MedStudy Board Certification Review Course, “Pulmonary Medicine and Pulmonary Function Testing,” Dallas, TX, 3/7/14


SC American College of Physicians, “New Approaches to Asthma Treatment,” Hilton Head Island, SC, 10/24/14
SELECTED PRESENTATIONS-LOCAL

“Community-acquired and hospital-acquired pneumonia,” Greenville Hospital System, Greenville, SC, 9/21/04

“Pneumonia,” Internal Medicine Board Review, Greenville Hospital System, Greenville, SC, 10/4/04

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 10/04

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 11/04

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 2/05

“Mechanical ventilation,” Greenville Hospital System, Greenville, SC, 4/8/05

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 4/05

“Hemodynamic monitoring,” Greenville Hospital System, Greenville, SC, 5/23/05

“Pulmonary artery catheterization,” Greenville Hospital System, Greenville, SC, 7/26/05

“Community-acquired and hospital-acquired pneumonia,” Greenville Hospital System, Greenville, SC, 9/19/05

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/05

Medical Grand Rounds, “More hope with the scope - Advances in diagnostic and interventional bronchoscopy,” Greenville Hospital System, Greenville, SC, 10/21/05
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 11/05

“Pulmonary Jeopardy,” Greenville Hospital System, Greenville, SC, 11/22/05

“Pulmonary Board Review,” Greenville Hospital System, Greenville, SC, 12/5/05

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 2/06

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 4/06

“CXR Conference-Basic Principles,” Greenville Hospital System, Greenville, SC, 7/21/06

“Procedure workshop,” Greenville Hospital System, Greenville, SC, 7/21/06

“CXR Conference-Diffuse Lung Diseases I,” Greenville Hospital System, Greenville, SC, 8/16/06

“CXR Conference-Diffuse Lung Diseases II,” Greenville Hospital System, Greenville, SC, 9/13/06

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/06

“CXR Conference-Diffuse Lung Diseases III,” Greenville Hospital System, Greenville, SC, 10/11/06

“Diagnostic and Interventional Bronchoscopy,” Respiratory Therapy Week, Greenville Hospital System, Greenville, SC, 10/06

“Fox and Hedgehog-Dermal metastases,” Greenville Hospital System, Greenville, SC, 11/3/06
“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/8/06

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 11/06

“Community-acquired and hospital-acquired pneumonia,” Greenville Hospital System, Greenville, SC, 11/20/06

“Pulmonary Jeopardy,” Greenville Hospital System, Greenville, SC, 12/5/06

“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/13/06

“Fox and Hedgehog-Tocolytic-induced pulmonary edema,” Greenville Hospital System, Greenville, SC, 1/5/07

“CXR Conference-Cavitary Lung Disease,” Greenville Hospital System, Greenville, SC, 1/10/07

“Fox and Hedgehog-Pulmonary Cryptococcus,” Greenville Hospital System, Greenville, SC, 2/2/07

“CXR Conference-Thoracic Fluid and Air,” Greenville Hospital System, Greenville, SC, 2/14/07

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 2/07

“Fox and Hedgehog-Hypothyroidism,” Greenville Hospital System, Greenville, SC, 3/2/07

“CXR Conference-Cardiovascular Diseases,” Greenville Hospital System, Greenville, SC, 3/14/07

“Fox and Hedgehog-Pneumococcal Meningitis,” Greenville Hospital System, Greenville, SC, 4/4/07

“CXR Conference-Mediastinal Masses,” Greenville Hospital System, Greenville, SC, 4/11/07
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 4/07

“Fox and Hedgehog-Spontaneous Esophageal Rupture,” Greenville Hospital System, Greenville, SC, 5/4/07

“CXR Conference-CT Scans,” Greenville Hospital System, Greenville, SC, 5/9/07

“CXR Conference-Exam and Review,” Greenville Hospital System, Greenville, SC, 6/13/07

“CXR Conference-Basic Principles,” Greenville Hospital System, Greenville, SC, 7/11/07

“Procedure Simulation-CVC, Arterial Lines, Intubation,” Greenville Hospital System, Greenville, SC, 7/18/07

“Top 10 ICU Cross-Cover Calls,” Greenville Hospital System, Greenville, SC, 7/23/07

“Procedure Simulation-Thoracentesis, Paracentesis, CVC, NG Tubes,” Greenville Hospital System, Greenville, SC, 7/25/07

“Procedure Simulation-LP, Arthrocentesis, CVC,” Greenville Hospital System, Greenville, SC, 8/1/07

“CXR Conference-Diffuse Lung Diseases I,” Greenville Hospital System, Greenville, SC, 8/8/07

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 8/9/07

“Fox and Hedgehog-Malignant Mesothelioma,” Greenville Hospital System, Greenville, SC, 8/22/07

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/6/07
“CXR Conference-Diffuse Lung Diseases II,” Greenville Hospital System, Greenville, SC, 9/12/07

“Pulmonary Hot Topics,” Greenville Hospital System, Greenville, SC, 9/25/07

“Fox and Hedgehog-Sarcoidosis,” Greenville Hospital System, Greenville, SC, 9/26/07

“CXR Conference-Diffuse Lung Diseases III,” Greenville Hospital System, Greenville, SC, 10/10/07

“Fox and Hedgehog-Ludwig’s Angina,” Greenville Hospital System, Greenville, SC, 10/24/07

“History of Medicine,” Respiratory Therapy Week, Greenville Hospital System, Greenville, SC, 10/07

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 11/07

“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/14/07

“The Seven Deadly Sins of Medicine,” Greenville Hospital System, Greenville, SC, 11/20/07

“Fox and Hedgehog-Isopropyl Alcohol Intoxication,” Greenville Hospital System, Greenville, SC, 11/28/07

“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/12/07


“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 1/8/08

“CXR Conference-Cavitary Lung Disease,” Greenville Hospital System, Greenville, SC, 1/9/08
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Fox and Hedgehog-Pulmonary Embolism/Fontan Procedure,” Greenville Hospital System, Greenville, SC, 1/23/08

“CXR Conference-Thoracic Fluid and Air,” Greenville Hospital System, Greenville, SC, 2/13/08

“Community-acquired and hospital-acquired pneumonia,” Greenville Hospital System, Greenville, SC, 2/19/08

“Fox and Hedgehog-Carbon Monoxide Poisoning,” Greenville Hospital System, Greenville, SC, 2/27/08

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 3/7/08

“CXR Conference-Cardiovascular Diseases,” Greenville Hospital System, Greenville, SC, 3/12/08

“Fox and Hedgehog-Gluteal Artery Laceration,” Greenville Hospital System, Greenville, SC, 3/26/08

“CXR Conference-Mediastinal Masses,” Greenville Hospital System, Greenville, SC, 4/9/08

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 5/9/08

“Pulmonary Fact or Crap,” Greenville Hospital System, Greenville, SC, 5/13/08

“CXR Conference-CT Scans,” Greenville Hospital System, Greenville, SC, 5/14/08

“Fox and Hedgehog-Ethylene Glycol Intoxication,” Greenville Hospital System, Greenville, SC, 5/28/08

“How to Teach Interns and Medical Students,” Internal Medicine Resident Retreat, Table Rock State Park, Greenville, SC, 5/29/08
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR Conference-Exam and Review,” Greenville Hospital System,
Greenville, SC, 6/11/08

“Top 10 ICU Cross-Cover Calls,” Greenville Hospital System,
Greenville, SC, 7/7/08

“CXR Conference-Basic Principles,” Greenville Hospital System,
Greenville, SC, 7/9/08

“Procedure Simulation-CVC, Arterial Lines, Intubation,” Greenville
Hospital System, Greenville, SC, 7/9/08

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis,
Paracentesis,” Greenville Hospital System, Greenville, SC, 7/16/08

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis,
Paracentesis, Chest Tubes, Pelvic Exam,” Greenville Hospital System,
Greenville, SC, 7/23/08

“CXR interpretation for medical students,” Greenville Hospital System,
Greenville, SC, 7/28/08

“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG
Tubes,” Greenville Hospital System, Greenville, SC, 7/29/08

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture,
Arthrocentesis,” Greenville Hospital System, Greenville, SC, 8/5/08

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC,” Greenville
Hospital System, Greenville, SC, 8/12/08

“History of US Medical Education,” Academy of Distinguished Educators,
Greenville Hospital System, Greenville, SC, 8/12/08

“CXR Conference-Diffuse Lung Diseases I,” Greenville Hospital System,
Greenville, SC, 8/13/08

“Procedural Simulation-CVC, Intubation, Mock Code,” Greenville Hospital
System, Greenville, SC, 8/19/08
SELECTED PRESENTATIONS-LOCAL (CONTINUED)

“Fox and Hedgehog-Bronchioalveolar cell carcinoma and Lipoid pneumonia,” Greenville Hospital System, Greenville, SC, 8/27/08

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/5/08

“CXR Conference-Diffuse Lung Diseases II,” Greenville Hospital System, Greenville, SC, 9/10/08

“Fox and Hedgehog-Eclampsia,” Greenville Hospital System, Greenville, SC, 9/24/08

“CXR Conference-Diffuse Lung Diseases III,” Greenville Hospital System, Greenville, SC, 10/8/08

“Assessment of Outcomes in a Comprehensive Faculty Development Program for a Community-Based Academic Medical Center,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 10/9/08

“Adult Learning Theories,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 10/14/08

“CXR interpretation for Respiratory Therapists,” Greenville Hospital System, Greenville, SC, 10/20/08

“Fox and Hedgehog-Saddle Pulmonary Embolism,” Greenville Hospital System, Greenville, SC, 10/22/08

“CXR interpretation for Respiratory Therapists,” Greenville Hospital System, Greenville, SC, 10/22/08

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 10/30/08

“Bedside Teaching,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 11/11/08

“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/12/08
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Community-acquired Pneumonia/Healthcare Associated Pneumonia,” Greenville Hospital System, Greenville, SC, 11/18/08

“Fox and Hedgehog-Methamphetamine toxicity,” Greenville Hospital System, Greenville, SC, 11/26/08

“ARDS for OB/GYN’s,” Greenville Hospital System, Greenville, SC, 12/5/08

“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/10/08

“Procedural Teaching,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 1/13/09

“CXR Conference-Cavitary Lung Disease,” Greenville Hospital System, Greenville, SC, 1/14/09

“Fox and Hedgehog-Diabetes Insipidus,” Greenville Hospital System, Greenville, SC, 1/21/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 2/9/09

“CXR Conference-Thoracic Fluid and Air,” Greenville Hospital System, Greenville, SC, 2/11/09

“Fox and Hedgehog-Chronic Eosinophilic Pneumonia,” Greenville Hospital System, Greenville, SC, 2/25/09

“CXR Conference-Cardiovascular Diseases,” Greenville Hospital System, Greenville, SC, 3/11/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 3/19/09

“Capstone Ventilator Workshop,” Greenville Hospital System, Greenville, SC, 3/20/09

“Fox and Hedgehog-Aortic Dissection,” Greenville Hospital System, Greenville, SC, 3/25/09
SELECTED PRESENTATIONS-LOCAL (CONTINUED)

“CXR Conference-Mediastinal Masses,” Greenville Hospital System, Greenville, SC, 4/8/09

“Evaluation and Feedback,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 4/14/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 5/12/09

“CXR Conference-CT Scans,” Greenville Hospital System, Greenville, SC, 5/13/09

“How to Teach Interns and Medical Students,” Internal Medicine Resident Retreat, Table Rock State Park, Greenville, SC, 5/14/09

“Pulmonary Fact or Crap,” Greenville Hospital System, Greenville, SC, 6/2/09

“CXR Conference-Exam and Review,” Greenville Hospital System, Greenville, SC, 6/10/09

“Top 10 ICU Cross-Cover Calls,” Greenville Hospital System, Greenville, SC, 7/2/09

“Ventilator Workshop,” Greenville Hospital System, Greenville, SC, 7/7/09

“CXR Conference-Basic Principles,” Greenville Hospital System, Greenville, SC, 7/8/09


“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis, Paracentesis,” Greenville Hospital System, Greenville, SC, 7/15/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 7/20/09

“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Hospital System, Greenville, SC, 7/29/09

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Hospital System, Greenville, SC, 8/5/09

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC,” Greenville Hospital System, Greenville, SC, 8/12/09

“CXR Conference-Diffuse Lung Diseases I,” Greenville Hospital System, Greenville, SC, 8/12/09

“Procedural Simulation-CVC, Intubation, Mock Code,” Greenville Hospital System, Greenville, SC, 8/19/09

“Fox and Hedgehog-Rhabdomyolysis,” Greenville Hospital System, Greenville, SC, 8/26/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/4/09

“CXR Conference-Diffuse Lung Diseases II,” Greenville Hospital System, Greenville, SC, 9/8/09

“Adult Learning Theories,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 9/16/09

“Journal Club-Plasma CRP in ARDS,” Greenville Hospital System, Greenville, SC, 9/17/09

“Fox and Hedgehog-Acute Intermittent Porphyria,” Greenville Hospital System, Greenville, SC, 9/23/09

“CXR Conference-Diffuse Lung Diseases III,” Greenville Hospital System, Greenville, SC, 10/14/09
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Theory of Multiple Intelligences,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 10/21/09

“Fox and Hedgehog-Reactive Arthritis,” Greenville Hospital System, Greenville, SC, 10/28/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 10/30/09

“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/11/09

“Our Lords, the Sick,” Greenville Hospital System, Greenville, SC, 11/17/09

“Bedside Teaching,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 11/18/09

“Fox and Hedgehog-Yohimbine toxicity,” Greenville Hospital System, Greenville, SC, 11/25/09

“CAP and HCAP,” Greenville Hospital System, Greenville, SC, 12/15/09

“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/16/09

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 1/7/10

“CXR Conference-Cavitary Lung Disease,” Greenville Hospital System, Greenville, SC, 1/13/10

“Active Learning Techniques,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 1/20/10

“Fox and Hedgehog-Ethylene glycol ingestion,” Greenville Hospital System, Greenville, SC, 1/27/10

“CXR Conference-Thoracic Fluid and Air,” Greenville Hospital System, Greenville, SC, 2/10/10
SELECTED PRESENTATIONS-LOCAL 
(CONTINUED)

“Lecturing,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 2/17/10

“Fox and Hedgehog-Metal Fume Fever,” Greenville Hospital System, Greenville, SC, 2/24/10

“Journal Club-Mortality in Prone Positioning for ARDS,” Greenville Hospital System, Greenville, SC, 2/25/10

“A Assessment of Outcomes in a Comprehensive Faculty Development Program,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/5/10

“The Art of Asking Questions to Promote Learning: An Instructional Design for Faculty Development,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/5/10


“Resident Supervision and Autonomy on Medical Teaching Services,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/5/10

“Driving Simulation Assessment and Training in High-Functioning Autistic Spectrum Disorders,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/5/10


“Central Venous Catheter Competence in Residency: Validity and Reliability of an Assessment Tool,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/5/10

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 3/8/10
SELECTED PRESENTATIONS-LOCAL (CONTINUED)

“CXR Conference-Cardiovascular Diseases,” Greenville Hospital System, Greenville, SC, 3/10/10

“Student Attention and Motivation,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 3/17/10

“Fox and Hedgehog-Torsades de Pointes,” Greenville Hospital System, Greenville, SC, 3/24/10

“CXR Conference-Mediastinal Masses,” Greenville Hospital System, Greenville, SC, 4/14/10

“Feedback and Evaluation,” Academy of Distinguished Educators, Greenville Hospital System, Greenville, SC, 4/21/10

“CXR Conference-CT Scans,” Greenville Hospital System, Greenville, SC, 5/12/10

“The Art of Asking Questions to Promote Learning,” Internal Medicine Resident Retreat, Table Rock State Park, Greenville, SC, 5/13/10

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 5/21/10

“Scabs and Guts,” Greenville Hospital System, Greenville, SC, 5/26/10

“Critical Care Simulation Skills,” Greenville Hospital System, Greenville, SC, 6/1/10

“Top 10 ICU Cross-Cover Calls,” Greenville Hospital System, Greenville, SC, 7/2/10

“Procedure Simulation-CVC, Arterial Lines, Intubation,” Greenville Hospital System, Greenville, SC, 7/7/10

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 7/8/10

“Ventilator Workshop,” Greenville Hospital System, Greenville, SC, 7/12/10
“CXR Conference-Basic Principles,” Greenville Hospital System, Greenville, SC, 7/14/10

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis, Paracentesis,” Greenville Hospital System, Greenville, SC, 7/14/10

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis, Paracentesis, Chest Tubes, Pelvic Exam,” Greenville Hospital System, Greenville, SC, 7/21/10

“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Hospital System, Greenville, SC, 7/28/10

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Hospital System, Greenville, SC, 8/4/10

“CXR Conference-Diffuse Lung Diseases I,” Greenville Hospital System, Greenville, SC, 8/11/10

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC,” Greenville Hospital System, Greenville, SC, 8/11/10

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/2/10

“CXR Conference-Diffuse Lung Diseases II,” Greenville Hospital System, Greenville, SC, 9/9/10

“How to Ask Effective Questions to Promote Learning—I,” Academy of Distinguished Educators, Greenville, SC, 9/15-16/10

“Top 10 Medical Breakthroughs of 2010,” Greenville Hospital System, Greenville, SC, 9/21/10

“CXR Conference-Diffuse Lung Diseases III,” Greenville Hospital System, Greenville, SC, 10/13/10

“How to Ask Effective Questions to Promote Learning—II,” Academy of Distinguished Educators, Greenville, SC, 10/20-21/10
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 11/1/10

“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/10/10

“Fox and Hedgehog-Ruptured Papillary Muscle,” Greenville Hospital System, Greenville, SC, 11/24/10

“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/15/10

Medical Grand Rounds, “The Death of a Classic: Mozart Myths Revisited,” Greenville Hospital System, Greenville, SC, 1/7/11

“How to Ask Effective Questions to Promote Learning—III,” Academy of Distinguished Educators, Greenville, SC, 1/19-20/11

“Fox and Hedgehog-Aortic Dissection Presenting as Acute Pericarditis,” Greenville Hospital System, Greenville, SC, 1/26/11

“CXR Conference-Thoracic Fluid and Air,” Greenville Hospital System, Greenville, SC, 2/1/11

“Fox and Hedgehog-Superior Vena Cava Syndrome,” Greenville Hospital System, Greenville, SC, 2/16/11

“Effects of Occult Metastases on Survival in Node-Negative Breast Cancer,” Journal Club, Team-based Learning, Greenville Hospital System, Greenville, SC, 2/17/11

“Simulation Procedural Skills Lab,” MIV Capstone Week, Greenville Hospital System, Greenville, SC, 3/2/11

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 3/7/11

“CXR Conference-Cardiovascular Diseases,” Greenville Hospital System, Greenville, SC, 3/9/11
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Ventilator Workshop,” MIV Capstone Week, Greenville Hospital System, Greenville, SC, 3/9/11

“How to Ask Effective Questions to Promote Learning—IV,” Academy of Distinguished Educators, Greenville, SC, 3/16-17/11


“Journal Club-Fixed Dose Combinations in Tb Therapy,” Greenville Hospital System, Greenville, SC, 4/19/11


“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 5/12/11

“Pulmonary Jeopardy,” Greenville Hospital System, Greenville, SC, 5/17/11

“Fox and Hedgehog-Primary Amyloidosis,” Greenville Hospital System, Greenville, SC, 5/18/11

“The Art of Asking Questions to Promote Learning,” Internal Medicine Resident Retreat, Table Rock State Park, Greenville, SC, 5/19/11


“New Intern Boot Camp,” Greenville Hospital System, Greenville, SC, 6/27/11

“Top 10 ICU Cross-Cover Calls,” Greenville Hospital System, Greenville, SC, 7/7/11

SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR Conference-Basic Principles,” Greenville Hospital System, Greenville, SC, 7/10/11

“Ventilator Workshop,” Greenville Hospital System, Greenville, SC, 7/12-13/11

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis, Paracentesis,” Greenville Hospital System, Greenville, SC, 7/18/11


“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Hospital System, Greenville, SC, 8/1/11

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Hospital System, Greenville, SC, 8/8/11

“CXR Conference-Diffuse Lung Diseases I,” Greenville Hospital System, Greenville, SC, 8/10/11

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 8/11/11

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC,” Greenville Hospital System, Greenville, SC, 8/15/11

“CXR Conference-Diffuse Lung Diseases II,” Greenville Hospital System, Greenville, SC, 9/14/11

“Chest Tube Workshop,” Greenville Hospital System, Greenville, SC 9/20/11


“Angry Birds Conference-Diagnostic Error,” Greenville Hospital System, Greenville, SC, 9/28/11
SELECTED PRESENTATIONS-LOCAL (CONTINUED)

Medical Grand Rounds, “Asthma Controversies,” Greenville Hospital System, Greenville, SC, 9/30/11

Medical Grand Rounds, “CAP Standards,” Greenville Hospital System, Greenville, SC, 10/21/11

“A Angry Birds Conference-Salicylate Poisoning,” Greenville Hospital System, Greenville, SC, 10/26/11

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 10/27/11

Medical Grand Rounds, “CAP Cases,” Greenville Hospital System, Greenville, SC, 10/28/11


“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/9/11


“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/14/11

“Journal Club-Frequency/Tidal Volume Ratio,” Greenville Hospital System, Greenville, SC, 12/15/11

“CXR Conference-Lateral Film,” Greenville Hospital System, Greenville, SC, 1/11/12

“A Angry Birds Conference-Disseminated Nocardiosis,” Greenville Hospital System, Greenville, SC, 1/25/12

“CXR Conference-Thoracic Fluid and Air,” Greenville Hospital System, Greenville, SC, 2/8/12
"Angry Birds Conference-Chylothorax," Greenville Hospital System, Greenville, SC, 2/22/12

"Improving Attitudes and Behaviors Towards Internal Medical Grand Rounds by Incorporating the Theory of Planned Behavior," Oral Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"Simulation with eye movement mapping to assess cognitive processing and competence in chest radiograph interpretation," Oral Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"Timeliness of STAT medication orders within the first 24 hours of admission," Oral Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"Assessment of outcomes in a comprehensive faculty development program," Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"Central Venous Catheter Competence in Residency: Validity and Reliability of an Assessment Tool," Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"Improved Education and Quality Outcomes in the ICU," Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"Driving Simulation Assessment and Training in High-Functioning Autistic Spectrum Disorders," Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

"The Art of Asking Questions to Promote Learning: An Instructional Design for Faculty Development," Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Attitudes and Exposures Affecting Career Choices in Internal Medicine,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

“Neurocognitive Dysfunction After LTACH Admissions,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

“Admission Times and Outcomes in the Medical ICU with 24-Hour Intensivist Coverage,” Poster Presentation, Medical Education Day, Greenville Hospital System, Greenville, SC, 3/2/12

“Ventilator Workshop,” MIV Capstone, Greenville Hospital System, Greenville, SC, 3/6/12

“Angry Birds Conference-Facial Fracture/Gastric Tear,” Greenville Hospital System, Greenville, SC, 3/12/12

“CXR Conference-Cardiovascular Diseases,” Greenville Hospital System, Greenville, SC, 3/14/12


Medical Grand Rounds, “Lung Cancer Screening,” Greenville Hospital System, Greenville, SC, 4/13/12

“CXR Conference-Mediastinal Masses,” Greenville Hospital System, Greenville, SC, 5/9/12

“Resident Teaching Skills Retreat,” Red Horse Inn, Landrum, SC, 5/18/12


“Total Health,” New Intern Orientation, Greenville Hospital System, Greenville, SC, 6/23/12
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Ventilator Cases,” Greenville Hospital System, Greenville, SC, 7/6/12


“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 7/16/12

“Top 10 ICU Cross-Cover Calls,” Greenville Hospital System, Greenville, SC, 7/17/12

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis, Paracentesis,” Greenville Hospital System, Greenville, SC, 7/18/12


“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Hospital System, Greenville, SC, 8/1/12

“Critical Thinking When Evaluating Literature,” Greenville Hospital System, Greenville, SC, 8/7/12

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Hospital System, Greenville, SC, 8/8/12

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC,” Greenville Hospital System, Greenville, SC, 8/15/12

“Procedural Simulation-Codes,” Greenville Hospital System, Greenville, SC, 8/22/12

“CXR Conference-Basics,” Greenville Hospital System, Greenville, SC, 8/29/12

“CXR Conference-Lateral Film,” Greenville Hospital System, Greenville, SC, 9/12/12
SELECTED PRESENTATIONS-LOCAL (CONTINUED)

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 9/17/12

“Horizontal vs. Vertical Learning,” Greenville Hospital System, Greenville, SC, 9/18/12

“Angry Birds Conference-Constrictive Pericarditis,” Greenville Hospital System, Greenville, SC, 9/25/12

Medical Grand Rounds, “Clinical Integration,” Greenville Hospital System, Greenville, SC, 9/28/12

“Angry Birds Conference-Cervical Spinal Stenosis/Paralyzed Diaphragm,” Greenville Hospital System, Greenville, SC, 10/24/12

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 11/5/12

“CXR Conference-Lobar Disease,” Greenville Hospital System, Greenville, SC, 11/14/12

“Pulmonary Conference,” Greenville Hospital System, Greenville, SC, 11/20/12

“Pulmonary Function Testing,” M-I, University of South Carolina School of Medicine Greenville, 11/27/12

“Angry Birds Conference,” Greenville Hospital System, Greenville, SC 11/29/12

“CXR Conference-Solitary Nodules,” Greenville Hospital System, Greenville, SC, 12/12/12

“Pulmonary Conference,” Greenville Hospital System, Greenville, SC, 12/18/12

“CXR Conference-Lateral Film,” Greenville Hospital System, Greenville, SC, 1/9/13

“Mechanical Ventilation in Asthmatics,” Greenville Hospital System, Greenville, SC, 1/15/13
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Journal Club,” Greenville Hospital System, Greenville, SC, 1/17/13

“Angry Birds Conference-Hyperthyroidism presents as STEMI,” Greenville Hospital System, Greenville, SC, 1/23/13

“CXR interpretation for medical students,” Greenville Hospital System, Greenville, SC, 1/28/13

“CXR Conference-Thoracic Fluid and Air,” Greenville Health System, Greenville, SC, 2/13/13

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 2/19/13

“Journal Club,” Greenville Health System, Greenville, SC, 2/21/13


“Assessment of Outcomes in a 5-Year Comprehensive Faculty Development Program,” Medical Education Day, Greenville Health System, Greenville, SC, 2/28/13

“Improved education and quality outcomes in the ICU,” Medical Education Day, Greenville Health System, Greenville, SC, 2/28/13

“Driving Simulation Training for Individuals with High-Functioning Autism,” Medical Education Day, Greenville Health System, Greenville, SC, 2/28/13

“Ventilator Workshop,” MIV Capstone, Greenville Health System, Greenville, SC, 3/5/13


“CXR Conference-Cardiovascular Diseases,” Greenville Health System, Greenville, SC, 3/13/13

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 3/14/13
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 3/19/13

“Journal Club,” Greenville Health System, Greenville, SC, 3/21/13


“Journal Club,” Greenville Health System, Greenville, SC, 4/18/13

“The Death of Mozart-A Classic Death?” University of South Carolina School of Medicine Greenville, M-I, Greenville, SC, 4/22/13


“Journal Club,” Greenville Health System, Greenville, SC, 5/16/13

“Resident Teaching Skills Retreat,” Red Horse Inn, Landrum, SC, 5/17/13

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 5/21/13


“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 5/24/13

“Total Health,” New Intern Orientation, Greenville Health System, Greenville, SC, 6/19/13

“Pulmonary Medicine and Pulmonary Function Testing,” IM Board Review, Greenville Health System, Greenville, SC, 6/20/13

“Top 10 ICU Cross-Cover Calls,” Greenville Health System, Greenville, SC, 7/1/13

SELECTED PRESENTATIONS-LOCAL (CONTINUED)


“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 7/11/13

“Ventilators-Part 1,” Greenville Health System, Greenville, SC, 7/16/13


“Ventilators-Part 2,” Greenville Health System, Greenville, SC, 7/18/13

“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Health System, Greenville, SC, 7/24/13

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Health System, Greenville, SC, 7/31/13

“Sodium Disorders,” Greenville Health System, Greenville, SC, 8/2/13

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC, Codes” Greenville Health System, Greenville, SC, 8/7/13

“Procedural Simulation-Codes,” Greenville Health System, Greenville, SC, 8/14/13

GHS Leadership Grand Rounds, “Basketball and Faculty Development,” Greenville, SC, 8/21/13

“Procedural Simulation-Codes,” Greenville Health System, Greenville, SC, 8/21/13


“Pulmonary Function Testing,” Greenville Health System, Greenville, SC, 9/17/13
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR Conference-Basics,” Greenville Health System, Greenville, SC, 9/19/13


“CXR Conference,” Greenville Health System, Greenville, SC, 10/9/13

“Journal Club,” Greenville Health System, Greenville, SC, 10/17/13

“CXR Conference,” Greenville Health System, Greenville, SC, 11/13/13

“Journal Club,” Greenville Health System, Greenville, SC, 11/21/13

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 12/9/13

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 12/17/13

“Journal Club,” Greenville Health System, Greenville, SC, 12/19/13

“CXR Conference,” Greenville Health System, Greenville, SC, 1/8/14

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 1/20/14

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 1/22/14

“CXR Conference,” Greenville Health System, Greenville, SC, 2/12/14

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 2/18/14

“Journal Club,” Greenville Health System, Greenville, SC, 2/20/14

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 2/26/14
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)


“CXR Conference,” Greenville Health System, Greenville, SC, 3/12/14

“Journal Club,” Greenville Health System, Greenville, SC, 3/20/14

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 3/24/14

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 4/15/14

“Journal Club,” Greenville Health System, Greenville, SC, 4/17/14


“CXR Conference,” Greenville Health System, Greenville, SC, 5/14/14

“Journal Club,” Greenville Health System, Greenville, SC, 5/15/14

“Resident Teaching Skills Retreat,” Red Horse Inn, Landrum, SC, 5/16/14

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 5/20/14


“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 6/16/14

“Top 10 ICU Cross-Cover Calls,” Greenville Health System, Greenville, SC, 7/1/14

“Procedure Simulation-CVC, Arterial Lines, Intubation,” Greenville Health System, Greenville, SC, 7/2/14

“CXR Conference,” Greenville Health System, Greenville, SC, 7/9/14
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Procedural Simulation-CVC, Arterial Lines, Intubation, Thoracentesis, Paracentesis,” Greenville Health System, Greenville, SC, 7/9/14

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 7/10/14


“Ventilators-Part 1,” Greenville Health System, Greenville, SC, 7/17/14

“Ventilators-Part 2,” Greenville Health System, Greenville, SC, 7/18/14

“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Health System, Greenville, SC, 7/23/14

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Health System, Greenville, SC, 7/30/14

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC, Codes” Greenville Health System, Greenville, SC, 8/6/14

“CXR Conference,” Greenville Health System, Greenville, SC, 8/13/14

“Procedural Simulation-Codes,” Greenville Health System, Greenville, SC, 8/13/14

“Procedural Simulation-Codes,” Greenville Health System, Greenville, SC, 8/20/14

“CXR Conference,” Greenville Health System, Greenville, SC, 9/10/14

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 9/16/14

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 9/24/14

“CXR Conference,” Greenville Health System, Greenville, SC, 10/8/14
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Journal Club,” Greenville Health System, Greenville, SC, 10/16/14

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 10/21/14

“Pulmonary Function Testing,” University of South Carolina School of Medicine Greenville, MI, 10/30/14

“CXR Conference,” Greenville Health System, Greenville, SC, 11/12/14

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 11/18/14

“Journal Club,” Greenville Health System, Greenville, SC, 11/20/14

“CXR Conference,” Greenville Health System, Greenville, SC, 12/10/14

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 12/16/14

“Journal Club,” Greenville Health System, Greenville, SC, 12/18/14

“CXR Conference,” Greenville Health System, Greenville, SC, 1/14/15

“Journal Club,” Greenville Health System, Greenville, SC, 1/15/15

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 1/20/15

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 1/28/15

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 2/4/15

“CXR Conference,” Greenville Health System, Greenville, SC, 2/11/15

“CXR Conference,” Greenville Health System, Greenville, SC, 3/11/15

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 3/17/15
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“Journal Club,” Greenville Health System, Greenville, SC, 3/19/15

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 4/3/15

“CXR Conference,” Greenville Health System, Greenville, SC, 4/8/15

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 4/21/15

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 4/22/15

“Ventilator Workshop,” MIV Capstone, Greenville Health System, Greenville, SC, 4/27/15

“Resident Teaching Skills Retreat,” Red Horse Inn, Landrum, SC, 5/8/15

“CXR Conference,” Greenville Health System, Greenville, SC, 5/13/15

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 5/18/15

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 5/19/15

“Procedure Simulation-CVC, Arterial Lines, Intubation,” Greenville Health System, Greenville, SC, 7/1/15


“Ventilators-Part 1,” Greenville Health System, Greenville, SC, 7/16/15

“Ventilators-Part 2,” Greenville Health System, Greenville, SC, 7/17/15
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 7/21/15

“Procedural Simulation-Chest Tubes, Pelvic Exam, Fundoscopic Exam, NG Tubes,” Greenville Health System, Greenville, SC, 7/22/15

“Procedural Simulation-Fundoscopic Exam, NG Tubes, Lumbar Puncture, Arthrocentesis,” Greenville Health System, Greenville, SC, 7/29/15

“Procedural Simulation-Lumbar Puncture, Arthrocentesis, CVC, Codes” Greenville Health System, Greenville, SC, 8/5/15

“Procedural Simulation-Codes,” Greenville Health System, Greenville, SC, 8/12/15

“Top 10 ICU Cross-Cover Calls,” Greenville Health System, Greenville, SC, 8/14/15

“Procedural Simulation-Codes,” Greenville Health System, Greenville, SC, 8/19/15

“ABG Interpretation,” Greenville Health System, Greenville, SC, 8/25/15

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 9/8/15

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 9/15/15


“CXR Conference,” Greenville Health System, Greenville, SC, 10/14/15

“Journal Club,” Greenville Health System, Greenville, SC, 10/16/15

“Angry Birds Conference,” Greenville Health System, Greenville, SC, 10/28/15
SELECTED PRESENTATIONS-LOCAL
(CONTINUED)

“CXR interpretation for medical students,” Greenville Health System, Greenville, SC, 11/9/15

“CXR Conference,” Greenville Health System, Greenville, SC, 11/11/15

“Pulmonary Function Testing,” University of South Carolina School of Medicine Greenville, MII, 11/16/15

“Pulmonary Conference,” Greenville Health System, Greenville, SC, 11/17/15

“Journal Club,” Greenville Health System, Greenville, SC, 11/19/15

“CXR Conference,” Greenville Health System, Greenville, SC, 12/9/15
PUBLICICATIONS

PEER-REVIEWED


J M Fuller. Build a faculty development program from scratch. HCPro Residency Program Alert, Nov 2009.


J M Fuller. A critical care service design that improves the learning environment and quality outcomes. in process

J M Fuller. Assessment of resident supervision and autonomy on medical and critical care teaching services,” in process
PEER-REVIEWED

JM Fuller. Outcomes in a comprehensive faculty development program. in process


JM Fuller. CXR interpretation skill assessment for internal medicine residents. in process

JM Fuller. Diagnosis of an intrathoracic thyroid mass by endobronchial ultrasound. in process


PUBLICATIONS
(CONTINUED)

NON-PEER REVIEWED

“Medical Myths,” Greenville Journal, 2005


ABSTRACTS

“Candida albicans endocarditis associated with prolonged central venous access,” Abstract, SC ACP, 2007, with Alan Thompson, MD

“Assessment of Outcomes in a Comprehensive Faculty Development Program for a Community-Based Academic Medical Center,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2008.

“Meningococcal meningitis and sepsis,” Abstract, SC ACP, 2008, with Ronnie Lindamood, MD


“Faculty Development for Community-Based Academic Centers,” Abstract, Association of Program Directors in Internal Medicine, 2009.

“Non-occlusive mesenteric ischemia,” Abstract, SC ACP, 2009, with Zack Stone, MD

“Cerebral vasculitis in patient with Wegener’s granulomatosis,” Abstract, SC ACP, 2009, with Erin Curtis, MD
ABSTRACTS

“Assessment of Outcomes in a Comprehensive Faculty Development Program,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010

“The Art of Asking Questions to Promote Learning: An Instructional Design for Faculty Development,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010

“A Resident Centered Critical Care Service Design Improves Learning Environment and Utilization,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010

“Resident Supervision and Autonomy on Medical Teaching Services,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010

“Driving Simulation Assessment and Training in High-Functioning Autistic Spectrum Disorders,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010

“Physician ED Triage: Improved Patient Satisfaction and Utilization,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010

“Central Venous Catheter Competence in Residency: Validity and Reliability of an Assessment Tool,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2010


ABSTRACTS

“Does Competency-Based Evaluation and Advancement Influence Attitudes about Appropriate Resident Supervision and Autonomy?” Medical Education Day, Greenville Hospital System, Greenville, SC, 2011

“Differences in Care and Outcomes on Weekends in the ICU,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2011


“Improving Attitudes and Behaviors Towards Internal Medical Grand Rounds by Incorporating the Theory of Planned Behavior,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2011


“Improving Attitudes and Behaviors Towards Internal Medical Grand Rounds by Incorporating the Theory of Planned Behavior,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012

“Simulation with eye movement mapping to assess cognitive processing and competence in chest radiograph interpretation,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012
ABSTRACTS

“Timeliness of STAT medication orders within the first 24 hours of admission,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012

“Assessment of outcomes in a comprehensive faculty development program,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012


“Improved Education and Quality Outcomes in the ICU,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012


“Attitudes and Exposures Affecting Career Choices in Internal Medicine,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012

“Neurocognitive Dysfunction After LTACH Admissions,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012

“Admission Times and Outcomes in the Medical ICU with 24-Hour Intensivist Coverage,” Medical Education Day, Greenville Hospital System, Greenville, SC, 2012
ABSTRACTS


“Incidence of GI Bleed Following PCI,” SC ACP meeting, Hilton Head, SC, 2012

“Assessment of Outcomes in a 5-Year Comprehensive Faculty Development Program,” Medical Education Day, Greenville Health System, Greenville, SC, 2013

“Improved education and quality outcomes in the ICU,” Medical Education Day, Greenville Health System, Greenville, SC, 2013

“Driving Simulation Training for Individuals with High-Functioning Autism,” Medical Education Day, Greenville Health System, Greenville, SC, 2013


“Improved Education and Quality Outcomes in the ICU,” University Healthcare Consortium, Orlando, FL, 2015
RECENT RESEARCH STUDIES

A Pivotal, Multi-Center, Multi-National, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy and Safety of TAK-242 in Adults with Severe Sepsis (Principal Investigator)

A Phase 3, Randomized, Double-Blind, Dose-Controlled Study to Assess the Efficacy and Safety of Fospropofol Injection for Minimal-To-Moderate Sedation in Patients Undergoing Flexible Bronchoscopy (Principal Investigator)

Assessment of Outcomes in a Comprehensive Faculty Development Program (Principle Investigator)

Analysis of Resident Supervision and Autonomy on Medical Teaching Services (Principle Investigator)

A Patient Centered Critical Care Service Design Improves Learning Environment and Utilization (Principle Investigator)

A Multi-Center Clinical Trial of the Bard Silver-Coated Endotracheal Tube to Reduce Ventilator Associated Pneumonia

A Phase 3, Multi-Center, Randomized, Double-Blind, Comparative Study of the Efficacy and Safety of Tigecycline vs. Imipenem/Cilastin for the Treatment of Subjects with Nosocomial Pneumonia

A Double-Blind, Placebo-Controlled, Parallel Multi-Center Study on Extended VTE Prophylaxis in Acutely Ill Medical Patients with Prolonged Immobilization

A Phase 3, Multi-Center, Randomized, Double-Blind, Comparative Study of the Efficacy and Safety of Tigecycline vs. Levoﬂoxacin for the Treatment of Subjects with Community-Acquired Pneumonia

A Multi-Center, Randomized, Open-Label, Phase 3 Study to Compare the Safety and Efficacy of Intravenous Doripenem with that of Intravenous Imipenem in Ventilator-Associated Pneumonia

A Randomized, Double-Blind, Placebo-Controlled, Multicenter, Parallel-Group Study to Evaluate the Efficacy and Safety of Ambrisentan in Subjects with Idiopathic Pulmonary Fibrosis and Pulmonary Hypertension
RECENT RESEARCH STUDIES (CONTINUED)

An Open-Label, Multicenter Study of Ambrisentan and Sildenafil Combination Therapy in Subjects with Pulmonary Arterial Hypertension with Documented Sub-Optimal Response to Sildenafil

Effect of Roflumilast (a PD4 Inhibitor) on Exacerbation Rate in Patients with COPD

A Randomized, Double-Blind, Placebo-Controlled, Phase-2B Study to Assess the Safety and Efficacy Effects of ART-123 (a Recombinant Soluble Thrombomodulin) on Subjects with Sepsis and Disseminated Intravascular Coagulation

A Randomized, Double-Blind, Active-Controlled, Parallel Group, Stratified, Multicenter Study Comparing the Safety and Efficacy of Fluticasone and Formoterol Combination in a Single Inhaler vs. Fluticasone and Formoterol alone in Patients with Mild to Moderate Asthma

Transitioning the Emergency Department into an Accountable Care Organization Model (Principle Investigator—ongoing)

Longitudinal Integrated Clerkships for Medical Students (Principle Investigator—ongoing)

Does Competency-Based Evaluation and Advancement Influence Attitudes about Appropriate Resident Supervision and Autonomy? (Principle Investigator—ongoing)

The Art of Asking Questions to Promote Learning: An Instructional Design for Faculty Development (Principle Investigator—ongoing)

Driving Simulation Assessment and Training for High-Functioning Autistic Spectrum Disorders (Principle Investigator, Collaborative with Developmental Pediatrics—ongoing)

Central Venous Catheter Competence in Residency: Validity and Reliability of an Assessment Tool (Principle Investigator—ongoing)

Electronic Learning Portfolios for Medical Students (Principle Investigator—ongoing)
RECENT RESEARCH STUDIES
(CONTINUED)

Differences in Care and Outcomes on Weekends in the ICU (Principle Investigator—ongoing)

Factors of Attitudes and Exposures Affecting Career Choices in Internal Medicine (Principal Investigator, Collaborating with Moravian College—ongoing)

Neurocognitive Deficits in Survivors of LTACH Admissions Effect Activities of Daily Living, Driving Ability, and Readmission Rates (Principal Investigator, Collaborating with NALTH—ongoing)

Simulation and Eye Movement Mapping Assessment of Neurocognitive Processing and Competence in Interpreting Chest Radiographs (GHS Principle Investigator, Collaborating with Clemson—ongoing)

Improving Attitudes and Behaviors Towards Internal Medical Grand Rounds by Incorporating the Theory of Planned Behavior (Principal Investigator)

Measurement and Assessment: Improving Faculty Skills in the Evaluation of Clinical Competence (Principal Investigator—ongoing)

Resident Supervision on Pediatric Services (Collaborating with GHS Pediatrics—ongoing)

Driving Assessment in COPD Patients (Collaborating with Department of Transportation and International Center for Automotive Research)
GRANTS

HRSA 10-232 Physician Faculty Development in Primary Care
(Principle Investigator—awarded, not funded)
Amount: $ 1,203,500

Advances in Patient Safety through Simulation Research—PAR-11-024:
Simulation and Eye Movement Mapping Assessment of Neurocognitive
Processing and Competence in Interpreting Chest Radiographs (GHS
Principle Investigator, Collaborative with Clemson University—awarded,
not funded)

Neurocognitive Deficits in Survivors of LTACH Admissions Effect Activities
of Daily Living, Driving Ability, and Readmission Rates (Principle
Investigator, Collaborative with National Association of Long-Term Acute
Care Hospitals—in submission)

PERSONAL

Marital Status          Married
Spouse’s Name           Julia C. Fuller
Children                Rebekah (born 11/29/94)
                        Grant (born 6/1/01)
                        Hannah (born 4/2/03)
Date/ Place of Birth    June 16, 1964, Roanoke, Virginia

Updated 12/31/15
## Continuing Medical Education Application

<table>
<thead>
<tr>
<th>Date:</th>
<th>4/20/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Title of Activity:</td>
<td><strong>Sixth Annual Upstate Stroke Symposium 2016</strong></td>
</tr>
<tr>
<td>Proposed Date of Activity:</td>
<td><strong>September 24th, 2016</strong> Time: <strong>8:10am- 3:30 pm</strong></td>
</tr>
<tr>
<td>Location of Activity:</td>
<td><strong>Site to be determined- Greenville</strong></td>
</tr>
<tr>
<td>Medical Dir. responsible for activity:</td>
<td><strong>Mahmoud Rayes, MD</strong></td>
</tr>
<tr>
<td>Phone Number:</td>
<td><strong>864-454-4500</strong> Fax: ____________ Email: <strong><a href="mailto:mrayes@ghs.org">mrayes@ghs.org</a></strong></td>
</tr>
<tr>
<td>Administrative Contact:</td>
<td><strong>Shannon Sternberg</strong></td>
</tr>
<tr>
<td>Phone Number:</td>
<td><strong>864-455-8848</strong> Fax: ____________ Email: <strong>s <a href="mailto:sternberg@ghs.org">sternberg@ghs.org</a></strong></td>
</tr>
<tr>
<td>Affiliation:</td>
<td><strong>GHS</strong></td>
</tr>
<tr>
<td>Address:</td>
<td><strong>701 Grove Rd</strong></td>
</tr>
<tr>
<td>City:</td>
<td><strong>Greenville</strong> State: <strong>SC</strong> Zip: <strong>29662</strong></td>
</tr>
<tr>
<td>Commercial/Financial Support [if applicable]:</td>
<td>Yes <strong>x</strong> No: ____________</td>
</tr>
<tr>
<td>If yes, please provide source name:</td>
<td><strong>Unconfirmed vendors</strong></td>
</tr>
<tr>
<td>Credits requested</td>
<td><strong>6.0</strong></td>
</tr>
<tr>
<td>(add minutes of education activities and divide by 60. Do not include breaks, introduction times, etc.)</td>
<td></td>
</tr>
<tr>
<td>Occurrence</td>
<td><strong>Once</strong></td>
</tr>
<tr>
<td>(i.e. weekly, monthly, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

This application is designed to assist planners in working through the steps that are required by the Accreditation Council for Continuing Medical Education (ACCME), the South Carolina Medical Association (SCMA) and Greenville Health System (GHS) prior to approval of CME activities sponsored by Greenville Health System.

All of the steps must be taken independently of commercial interests. Further, all persons who are in a position to control CME content must disclose all relevant financial relationships with regards to commercial interest to the CME Department. The GHS-CME Department must implement mechanisms to identify and resolve all conflicts of interest before any CME activity occurs.
Step 1: Identifying the educational gap(s)

The planning process begins by identifying at least one educational gap. This educational gap can be expressed as the difference between what actually occurs and what should occur to give the best possible care to our patients.

The person filling out this application must (a) describe the identified gap(s); (b) determine whether closing the identified gap(s) will improve knowledge, enhance competency, and/or change physicians behavior; (c) identify barriers that may need to be overcome to close the gap(s); and (d) describe how the gap was analyzed so the cause of the problem is being addressed through CME.

The latter is termed “needs assessment” and must include at least two different sources. For example, scientific evidence for the literature; opinion from clinical or scientific experts; information from the general public, the media and/or other environmental sources; observed data from local or national databases; and/or survey from past participants or prospective learners. Whenever possible, it is important to utilize our Quality Initiatives and other forms of organizational data to address your department needs assessment.

### A. What is/are the educational gap(s)? How was this gap (were these gaps) identified? What is/are the quality gap(s) that this CME activity is designed to address?

Educational gaps include rapid changes to the whole stroke care spectrum from prevention to acute treatment. Ischemic as well hemorrhagic stroke are undergoing fast paced advances. Gaps identified by questions from staff physicians, mid-level providers, nursing and therapists regarding treatment/therapies for ischemic and hemorrhagic stroke.

**References:**

- Scientific Rationale for the Inclusion and Exclusion Criteria for Intravenous Alteplase in Acute Ischemic Stroke
- A Statement for Healthcare Professionals From the American Heart Association/American Stroke Association

*Stroke.* Published online before print December 22, 2015

This publication includes multiple new recommendations and revisions to the old inclusion and exclusion criteria for tPa in ischemic stroke. GHS has developed processes related to tPa administration prior to these guidelines. The stroke team at GHS is planning to change the inclusion/exclusion criteria for tPa based on these recent guidelines. Knowledge gaps regarding these new changes need to be discussed and detailed with most physician and nurses.

From the American Heart Association/American Stroke Association

*Stroke*. 2014; 45: 2160-2236

*This publication includes multiple new recommendations, revised recommendations, and reinforcement of previous Class 1 recommendations that impact stroke prevention management.*

Evidence-Based Guidelines for the Management of Large Hemispheric Infarction

A Statement for Health Care Professionals from the Neurocritical Care Society and the German Society for Neuro-Intensive Care and Emergency Medicine

*This publication includes multiple new recommendations, revised recommendations, and reinforcement of previous Class 1 recommendations that management of cerebral and cerebellar edema.*

AHA/ASA Guideline: **Guidelines for the Management of Aneurysmal Subarachnoid Hemorrhage**

*Stroke*. 2012; 43: 1711-1737

AHA/ASA Guideline: **Guidelines for the Management of Spontaneous Intracerebral Hemorrhage**

*Stroke*. 2010;41:2108-2129.

**Guidelines for the Early Management of Patients With Acute Ischemic Stroke:** Executive Summary: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association

*Stroke*. March 2013 vol. 44 no. 3 870-947

GHS has used recommendations from this document to shape and improve stroke care, but opportunities for improvement continue to exist.

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B. What is the reason that the gap exists? Is it because physicians do not know something (i.e., there is a knowledge deficit)? Is it because physicians are not able to do something (i.e., there is a competency deficit)? Is it because the physician did something, or failed to do something (i.e., there is sub-optimal physician behavior)?

Treatment and interventions are constantly changing in cerebrovascular disease with an emphasis on expediency and currency. This results in opportunities for improvement based on updated and new information every day. Recently published guidelines change the old inclusion/exclusion criteria for tPa in patients with acute ischemic stroke. Further, there are new data to support extending the endovascular treatment for acute stroke beyond 6 hours from onset.

C. What are the barriers facing the learners who are trying to close the identified gap(s)?
This symposium will provide a medium to bring multiple disciplines together in order to increase interactions with experts in the field. Case studies will be planned to show case how acute treatment can change stroke outcome.

D. What sources and kinds of information (i.e., needs assessment data) did you use to figure out the cause of the gap? Please attach documentation of at least two sources that were used to identify the learning gap(s).

We have reviewed GWTG-Stroke Registry for core measures and quality measures and identified a need for further awareness of treatment of acute ischemic and hemorrhagic stroke.

In examination of the quality measures, there is delay in diagnosis and initiation of approved therapies/interventions secondary to knowledge deficits.

Grassroots interactions with physician staff about imaging and treatment choices demonstrate a knowledge deficit and curiosity at the bedside. This will likely require a repetitive or annual education process to build on and reinforce these topics.

GHS is a Joint Commission certified Primary Stroke Center with a goal of growing and refining services that would meet the criteria and definition of a Comprehensive Stroke Center. (see JC CSC Disease Specific Care Manual).

As a JC PSC that provides endovascular services for stroke, GMH is required to ensure that healthcare providers have been educated about treatment options and patient selection criteria to ensure timely evaluation and revascularization procedure.

Responses from 2015 symposium?

• Continue to get Key Opinion Leaders (Both Physicians and RN's) to speak to educate on current and future trends in healthcare.
• Updates on guidelines, and current events and new treatment capabilities.
• More on pharm management
• More information about rehabilitation programs

Step 2: Identifying the Target Audience

CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients or the profession. **CME activities are intended to increase competency, influence physician behavior, and/or improve patient outcomes.** The major reason for planning your CME activity should be to close the gap(s) you identified in Step 1.

The next step is to identify the target audience for your proposed activity. By clearly identifying the specific target audience for the proposed CME activity, you will be able to plan a learning process that will enable the learners to close the identified gap(s).

You should specify both the general type of health professional that you want to target (i.e., physicians, nurses, pharmacists, etc.) as well as the specific type of learner within those broad categories (e.g., primary care physicians, infectious disease specialists, neurologists, transplant surgeons, etc.). **Please note:** Only physicians may be awarded *AMA PRA Category 1 Credit™* by accredited providers. All other non-physician health professionals will receive attendance. For CME, physicians must always be the primary target audience for a continuing medical education activity.
Step 3: Specifying the Pertinent ABMS/ACGME Competency

The American Board of Medical Specialties (ABMS), Institute of Medicine (IOM) Core Competencies, and Accreditation Council for Graduate Medical Education (ACGME) have determined that there are six critical competencies that physicians must master in order to provide optimal clinical care. The 3rd step in the CME planning process is to specify which of the following competencies is most relevant to a gap(s) that has/have been identified: (1) patient care; (2) medical knowledge; (3) practice-based learning and improvement; (4) interpersonal and communication skills; (5) professionalism; and (6) systems-based practice. If you would like more information about the six ABMS competencies, please see the following web site: http://www.abms.org/Maintenance_of_Certification/MOC_competencies.aspx

Step 4: Identifying Potential Partners and Allies

Closing the identified gap may be a daunting task. It is worth your time to consider whether other groups or organizations are working on the same issue. If so, joining forces with them may help you accomplish your common goal of closing the identified gap(s). Working with other groups may increase access to scarce resources, improve efficiency, and produce synergistic partnerships. Importantly, these potential partners may be internal or external to your organization or unit. Step 4 of the planning process involves identifying who these potential partners are.
Step 5: Identifying Non-Educational Strategies

Numerous research studies have shown that CME interventions can increase competency, influence physician behavior, and/or improve patient outcomes. These findings were confirmed in a 2007 report by the Agency for Healthcare Research and Quality [Evidence Report / Technology Assessment; Number 149: AHRQ, 2007]. Nevertheless, education of health professionals is only one strategy that should be used to improve patient safety and healthcare quality. Importantly, there are many non-educational strategies that may play a crucial role in improving quality. This is especially true when one considers the gaps that can best be addressed with “system-level” interventions. As such, step 5 involves the identification of non-educational strategies that may help close the identified gap(s).

<table>
<thead>
<tr>
<th>Step #5</th>
<th>Are there non-educational strategies (e.g., patient reminders, order sets, computer training check sheets, guidelines, pocket cards, etc.) that are currently being used to close the identified gap(s)? If not, what kind of non-educational strategies could be created/used?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCME C17</td>
<td>Yes, there are order sets, fliers, online resources including guidelines/statements, algorithms</td>
</tr>
</tbody>
</table>

Step 6: Determining the Appropriate Evaluation Methodology

In order to determine whether the identified gap(s) has/have been closed, the CME activity must be evaluated. Similarly, the evaluation methodology must match the type of gap that was initially identified in step 1. For example, an activity designed to change the behavior of a physician should not be limited to a post-activity survey that only asks whether participants were satisfied with the quality of the handout materials.

To that end, a useful paradigm that is used in educational circles to measure educational impact involves various levels of evaluation. The ten levels are as follows: (1) learner participation; (2) learner satisfaction; (3) learner knowledge; (4) learner learning, measured before and after an educational intervention; (5) learner competence or ability, measured by a variety of techniques that determine whether a physician can apply the knowledge they have in the care of patients (i.e., this knowledge in practice can be determined by questions that measure application, case-based assessments, and/or simulations); (6) self-reported learner behavioral change, typically determined by participants filling out an “intent-to-change” form immediately following an educational activity, followed by a questionnaire or interview a few months later; (7) documented learner change in behavior, determined by a third party that measured actual behavior both before and after an educational intervention; (8) impact on individual patients, as measured by health outcomes on specific patients; (9) impact on patient populations, as measured by health outcomes on a patient or population cohort; and (10) the cost of the educational intervention, better known as the return on education (ROE).

The first part of step 6 of the planning process requires that you specify which level of educational evaluation would best determine whether the CME activity has closed the identified gap(s) you identified in step 1 in this document. The second part of step 6 involves the selection of one or more tools that will be used to determine whether or not the gap(s) has/have been closed after the intervention is complete.

1. Which of the ten levels of educational evaluation described above will best...
determine whether your educational activity has closed the identified gap(s)? GHS requires that CME activities measure Level 1 (participation) as well as Level 5 (competence), Level 6 (self-reported learner behavior change), Level 7 documented learner change in behavior, Level 8 (impact on individual patients), or Level 9 (impact on populations). You can check all that apply.

- (Level 1) Participation
- (Level 5) Learner competence or ability
- (Level 6) Self-reported learner behavioral change
- (Level 7) Documented learner change in behavior
- (Level 8) Impact on individual patients
- (Level 9) Impact on patient populations

2. What type of evaluation method/tool(s) will you use to determine whether the identified gap(s) has/have been closed? The tool must be able to measure Level 1 as well as Level 5, Level 6, Level 7, Level 8, or Level 9. Do you plan on using this/these tool(s) on every participant or a sample of the learners?

Step 7: Determining the Desired Results, Learning Objectives and Content of the CME Activity

In steps 2 and 3, the target audience and pertinent ABMS/ACGME competency were identified. Subsequent steps involved the identification of non-educational interventions and potential allies that could help close the identified gap(s). Step 6 involved the identification of an appropriate evaluation methodology that will be used to judge whether the activity has successfully closed the identified gap(s). In step 7, the desired results, learning objectives and content of the CME activity are determined.

Importantly, this step has been deliberately placed at this stage in the planning process. In other words, **the identified gap(s) and the issues identified in previous steps should always be considered BEFORE the learning objectives and educational content are decided.**

Learning objectives can be thought of as “stepping stones” that help learners understand the nature of the identified gap(s). Well thought out learning objectives also serve as a guide to instructors so that they create content that will help learners close the identified gap(s). As such, objectives should contain action verbs and criteria that help activity planners evaluate whether the gap(s) was/were closed (e.g., whether the activity helped improve competency, influence physician behavior, and/or improve patient outcomes). **Moreover, planners should present the learning objectives to instructors and authors, not vice versa.**

Similarly, the content should reflect the premises outlined in the learning objectives. In turn, the content should be dictated by the need to close the identified gap(s). In other words, CME planners for your department should direct instructors to address the need(s) identified in step 1 (i.e., the cause that is responsible for the gap in optimal care). Faculty may be actively involved in the process of content creation; however, they should never lose sight of what the planners are trying to achieve (i.e., helping the learners close the identified gap by addressing the need to
improve knowledge, enhance competence, influence behavior, and/or improve patient outcomes).

In addition, the creation of CME content must strictly adhere to all pertinent ACCME Essential Areas and the Standards for Commercial Support. **To that end, GHS only sponsors CME activities that promote improvements or quality in healthcare and not the proprietary interests of any commercial organization.** All relevant financial relationships with commercial interests must be disclosed to the GHS - CME department so that methods to resolve any conflicts of interest may be implemented prior to the CME activity taking place. Further, the management of any commercial support must strictly adhere to the Standards for Commercial Support. In all cases, education is separated from promotion. Disclosure to the learners of relevant financial relationships and any commercial support of the activity must also occur.

### Step 7

<table>
<thead>
<tr>
<th>A. Based on the identified gap(s) as well as the cause for the gap that you discovered through the needs assessment analysis, what are the desired results of the CME activity? Based on this answer, what is the content you want to cover?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaps to be filled are current and new therapies, treatments and diagnostics used in acute ischemic, hemorrhagic stroke, and subarachnoid hemorrhage. Information provided to audience will translate to the clinical arena.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Based on the identified gap(s) and the desired result(s), what is/are the activity objective(s)?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose:</strong> Increase knowledge and awareness of advances in stroke care</td>
</tr>
<tr>
<td><strong>Objectives:</strong> Discuss the endovascular management of acute ischemic stroke and cerebral aneurysms Describe stroke systems of care impact on EMS routing Discuss secondary stroke and TIA prevention management Describe post-stroke rehabilitation treatment options Discuss management of acute hemorrhagic stroke</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. How does the content relate to the current or potential scope of practice of the physician target audience?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target audience is involved in stroke and post-stroke care of patients and they will gain knowledge and expertise in cerebrovascular disease and treatment.</td>
</tr>
</tbody>
</table>

### Step 8: Selecting the Appropriate Educational Methodology

Importantly, the educational methodology should reflect the gap(s) identified in step 1, the evaluation methodology chosen in step 6, as well as the desired results, learning objectives, and the content chosen in step 7. Whenever possible, adult learning principles (as well as the physician learning and change process) should be taken into account when selecting appropriate educational methodology.
### Step 8

| **A.** Based on the previous steps, what is/are the right educational format(s) to use for the activity? What type of activity will it be (i.e., live activity, enduring material, internet, performance improvement, internet point of care, etc.)? Why? |
| **ACCME C3, C5** |
| Live activity |

| **B.** What will be the educational design of the activity (e.g., presentation, case-based, round table, simulation, etc.)? Consider adult learning principles and the identified gap(s). |
| **ACCME C3, C5** |
| Presentations, case discussions, patient presentation |

| **C.** Is the educational format appropriate to the setting, your objectives, and your desired result(s)? |
| **ACCME C5** |
| Yes |

| **D.** How do the educational format/methodology and design components of the CME activity support the desired results and learning objectives outlined in step 7? |
| **ACCME C5** |
| The method of education has the greatest potential to reach our learners with the objectives set forth for the program. |

### Step 9: Selecting Speakers

Speakers should be selected only after the content has been chosen and the educational methodology has been determined. **You should select speakers that are best prepared to teach the activity that you have planned, not vice versa.** Criteria to consider when instructors are selected might include the following: demonstrated expertise in the content area selected; ability to communicate effectively with the target audience; and willingness to meet the educational needs that the planning committee has identified. In the end, speaker should understand what the purpose of the CME activity is (i.e., to improve competence, influence behavior, and/or to improve patient outcomes). **Please note:** All speakers are required to complete CME documentation. All external speakers must complete an entire CME package. Please contact the CME Coordinator to make arrangements to collect all the necessary paperwork for your speakers. The CME department will not award CME credit for any activities that fail to complete all the appropriate CME forms **prior** to the event.

| **Step 9** |
| Who are the right faculty to cover this content? Do you want them to focus on transfer of information (i.e., lectures and monographs), techniques to overcome gaps in competence (e.g., algorithms and case-based discussions), or strategies to overcome system problems (e.g., guidelines, policies, and toolkits)? |
| **ACCME C3, C5** |
| Faculty will be diverse to cover a range of learning objectives. The main focus will be transfer of information on patient care with some techniques to overcome gaps in competence. |

### Step 10: Describe your CME activity
The final step is to simply describe, in your own words, what you envision for your CME activity.

The event will provide an overview of stroke care and review current guidelines and interventions. It will incorporate a range of speakers with diverse specialty interests and certifications in stroke care to deliver a unified message to all participants. The ultimate goal is to promote, achieve, and maintain high quality stroke care in the Upstate and abroad through education, innovation, research, and dedication.

Thank you for your diligence in planning a CME activity of excellence. Your work is greatly appreciated by Greenville Health System and the Continuing Medical Education Department.

The following items must be attached to this application in order to be submitted for approval:

- Complete and attach: Copies of all Planning Committee Member CV
- Copies of all speaker CV/Bios
- Copies of Planning Committee Member disclosure forms
- Copies of two sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc).
- A copy of the rough draft of the agenda (including introduction time, breaks, etc.)
- A copy of the tentative budget typed up.

In addition, one person must be identified as a person of contact for the CME Department to make initial contact. Also, this identified person will be responsible for ensuring all required paperwork has been turned in to the CME Department. Please list the name and phone number of this individual: ________________________________________________________________.

**Medical Director responsible for activity:** Please check to see that all required attachments (listed above) are included with this completed application form.

If all the attachments are included:

Please Sign Here: ___Mahmoud Rayes, MD______________________________

List the Planning Committee members and their respective institutional affiliation:

Each member of the Planning Committee, including the Facilitator must complete an annual CME Disclosure Form. Please send (scanned or electronic document preferred) the completed CME Disclosure Form to the Continuing Medical Education office as part of this application.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institutional Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahmoud Rayes, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Sharon Webb, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Angel Rochester, MD</td>
<td>GHS</td>
</tr>
</tbody>
</table>
Please allow up to 1 – 2 months for approval of your CME activity.
If you have any questions, please feel free to contact:

Amanda Gillespie – CME Coordinator
Greenville Health System
701 Grove Road – MCC Building
Greenville, South Carolina 29605
(864) 455-6478
agillespie@ghs.org

Sally Cade – CME Coordinator
Greenville Health System
701 Grove Road – MCC Building
Greenville, South Carolina 29605
(864) 455-3552
scade@ghs.org

The Continuing Medical Education Office is located on the back side of the MCC Building.
## Agenda

### Stroke Symposium

<table>
<thead>
<tr>
<th>Presentation Topic/Title</th>
<th>Speaker</th>
<th>Min</th>
<th>Start</th>
<th>Finish</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration/Continental Breakfast</td>
<td></td>
<td>7:15</td>
<td>8:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welcome</td>
<td>Raul Nogueira, MD</td>
<td>0:10</td>
<td>8:00</td>
<td>8:10</td>
<td>Discus current data and trials supporting endovascular treatment of acute stroke beyond 6 hours and how to select patients who will benefit</td>
</tr>
</tbody>
</table>
| Endovascular Stroke Management | Raul Nogueira, MD  
Emory University School of Medicine  
Director of Neuroendovascular Service and Neurocritical Care Service  
Marcus Stroke & Neuroscience Center, Grady Memorial Hospital | 0:40| 8:10  | 8:50   |                                                                                                                                              |
| New Fronteirs in ICH     | Ryan Hakimi, DO, MS  
Associate Professor  
Medical Director, OU Medical Center Neurosciences Intensive Care Unit | 0:40| 8:50  | 9:30   | Discuss new treatment options and goals in ICH                                                                                              |
| Break/Vendors            |                                              | 0:20| 9:30  | 9:50   |                                                                                                                                              |
| Endovascular treatment of vascular malformation | Sharon Webb, MD, FAANS, FACS, FAHA  
Director of Endovascular, Cerebrovascular and Neurocritical Care  
Southeastern Neurosurgery and Spine Institute | 0:40| 9:50  | 10:30  | Discuss treatment options for AVM, fistula and cavernoma                                                                               |
| EMS, RACE, and Flight    | EMS Rep or ED MD                           | 0:30| 10:30 | 11:00  | Discuss new scale for EMS RACE and role of bypassing primary stroke centers for patients with high RACE                                   |
| Changes in tPa inclusion/exclusion | Swaroop Pawar, MD  
0:40 11:00 11:40 | 0:40| 11:00 | 11:40  | Discuss new guidelines in inclusion/exclusion criteria for tPa in acute ischemic stroke                                                   |
| Lunch/vendors            |                                              | 0:40| 11:40 | 12:20  |                                                                                                                                              |
| Stroke in kids           | Peds Neurology                              | 0:35| 12:20 | 12:55  | Discuss causes and treatment considerations in the pediatric stroke population                                                          |
| When anticoagulation in not feasible in afib options | Cardiologist - i.e. Watchman device | 0:30| 12:55 | 13:25  | Discuss secondary stroke and TIA prevention management                                                                                 |
| Secondary stroke prevention outside of aspirin, plavix and coumadin | Kimberly B. Clark, PharmD  
Clinical Pharmacy Specialist, Critical Care; South Carolina College of Pharmacy Greenville Campus Coordinator | 0:35| 13:25 | 14:00  | Discuss secondary stroke and TIA prevention management                                                                                 |
| Break/Vendors            |                                              | 0:15| 14:00 | 14:15  |                                                                                                                                              |
| Case discussion          | panel discussion                            | 0:35| 14:15 | 14:50  |                                                                                                                                              |
| Post-Acute Rehab-Community Re-Entry After Stroke? | Physiatrist | 0:35| 14:50 | 15:25  | Describe post-stroke rehabilitation treatment options                                                                                 |
| Closing/Evaluations      |                                              | 0:05| 15:25 | 15:30  |                                                                                                                                              |

**CME 6:00**
## Budget

### Stroke Symposium

<table>
<thead>
<tr>
<th><strong>Debits/Expenses</strong></th>
<th><strong>Credits/Registrations and Exhibitors Fees</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment for audio mixer</td>
<td></td>
</tr>
<tr>
<td>Venue</td>
<td>$15,000.00</td>
</tr>
<tr>
<td>Meeting Space</td>
<td></td>
</tr>
<tr>
<td>Audio Visual Supplies</td>
<td>Registration Fees (Net) $3,500.00</td>
</tr>
<tr>
<td>Service Charges</td>
<td></td>
</tr>
<tr>
<td>Taxes</td>
<td></td>
</tr>
<tr>
<td>Vendor tables</td>
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<tr>
<td>Catering + AV</td>
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</tr>
<tr>
<td><strong>Exhibitor Fees</strong></td>
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</tr>
<tr>
<td>Speakers</td>
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<tr>
<td>Speaker Gifts</td>
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</tr>
<tr>
<td>Raul Nogquera</td>
<td>Chiesi</td>
</tr>
<tr>
<td>Honorarium</td>
<td>$1,500.00</td>
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<tr>
<td>Lodging</td>
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</tr>
<tr>
<td>Travel</td>
<td>$200.00</td>
</tr>
<tr>
<td>Rental Car</td>
<td>RCP/Equipped for Life, Westend Coop</td>
</tr>
<tr>
<td></td>
<td>Genentech USA</td>
</tr>
<tr>
<td></td>
<td>Janssen Pharma</td>
</tr>
<tr>
<td></td>
<td>Spartanburg Rehab dba Ernest Health</td>
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<tr>
<td></td>
<td>The Medicine Group</td>
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<tr>
<td></td>
<td>Stryker</td>
</tr>
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<td></td>
<td>American Stroke Association</td>
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<tr>
<td>Marketing</td>
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<tr>
<td>Printing</td>
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<tr>
<td>Marketing</td>
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</tr>
<tr>
<td>WHAG and Medical Staff Times</td>
<td>$0.00</td>
</tr>
<tr>
<td>Syllabus Placed on CME Website</td>
<td>$0.00</td>
</tr>
<tr>
<td>Posters</td>
<td>$100.00</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td>$18,335.00</td>
</tr>
<tr>
<td><strong>Total Debits</strong></td>
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</tr>
<tr>
<td><strong>CME Recovery Fee</strong></td>
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<tr>
<td>$150 x 6 CME hours</td>
<td>$900.00</td>
</tr>
<tr>
<td><strong>Balance</strong></td>
<td>$35.00</td>
</tr>
</tbody>
</table>
Continuing Medical Education Application

Date: 11/10/15

Proposed Title of Activity: Urology Journal Club

Proposed Date of Activity: Last Mon, Every other month
Time: 6:30 – 8:30 pm

Location of Activity: Offsite

Medical Dir. responsible for activity: Kelly Maloney

Phone Number: 455-6338 Fax: 455-1320 Email: kmaloney@ghs.org

Administrative Contact: Lynn Gorfine

Phone Number: 455-6338 Fax: 455-1320 Email: lgorfine@ghs.org

Affiliation: GHS

Address: 701 Grove Rd

City: Greenville State: SC Zip: 29605

Commercial/Financial Support [if applicable]: Yes No: X
(Any source of funds not provided from GHS operational accounts)

If yes, please provide source name:

Credits requested: 2
(add minutes of education activities and divide by 60. Do not include breaks, introduction times, etc.)

Occurrence Every other month # per year 6
(i.e. weekly, monthly, etc.)

This application is designed to assist planners in working through the steps that are required by the Accreditation Council for Continuing Medical Education (ACCME), the South Carolina Medical Association (SCMA) and Greenville Health System (GHS) prior to approval of CME activities sponsored by Greenville Health System.

All of the steps must be taken independently of commercial interests. Further, all persons who are in a position to control CME content must disclose all relevant financial relationships with regards to commercial interest to the CME Department. The GHS-CME Department must implement mechanisms to identify and resolve all conflicts of interest before any CME activity occurs.

Revised August 1, 2014
Step 1: Identifying the educational gap(s)

The planning process begins by identifying at least one educational gap. This educational gap can be expressed as the difference between what actually occurs and what should occur to give the best possible care to our patients.

The person filling out this application must (a) describe the identified gap(s); (b) determine whether closing the identified gap(s) will improve knowledge, enhance competency, and/or change physicians behavior; (c) identify barriers that may need to be overcome to close the gap(s); and (d) describe how the gap was analyzed so the cause of the problem is being addressed through CME.

The latter is termed “needs assessment” and must include at least two different sources. For example, scientific evidence for the literature; opinion from clinical or scientific experts; information from the general public, the media and/or other environmental sources; observed data from local or national databases; and/or survey from past participants or prospective learners. Whenever possible, it is important to utilize our Quality Initiatives and other forms of organizational data to address your department needs assessment.

<table>
<thead>
<tr>
<th>A. What is/are the educational gap(s)? How was this gap (were these gaps) identified? What is/are the quality gap(s) that this CME activity is Designed to address?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The need to be familiar with the latest clinical research in Urology and Knowledge of new AUA guidelines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. What is the reason that the gap exists? Is it because physicians do not know something (i.e., there is a knowledge deficit)? Is it because physicians are not able to do something (i.e., there is a competency deficit)? Is it because the physician did something, or failed to do something (i.e., there is sub-optimal physician behavior)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge deficit</td>
</tr>
</tbody>
</table>

Revised August 1, 2014
C. What are the barriers facing the learners who are trying to close the identified gap(s)?

Lack of time to review urological literature

D. What sources and kinds of information (i.e., needs assessment data) did you use to figure out the cause of the gap? Please attach documentation of at least two sources that were used to identify the learning gap(s).

1. American Board of Urology – Maintenance of Certification
2. Letter from Division Chief

Step 2: Identifying the Target Audience

CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients or the profession. **CME activities are intended to increase competency, influence physician behavior, and/or improve patient outcomes.** The major reason for planning your CME activity should be to close the gap(s) you identified in Step 1.

The next step is to identify the target audience for your proposed activity. By clearly identifying the specific target audience for the proposed CME activity, you will be able to plan a learning process that will enable the learners to close the identified gap(s).

You should specify both the general type of health professional that you want to target (i.e., physicians, nurses, pharmacists, etc.) as well as the specific type of learner within those broad categories (e.g., primary care physicians, infectious disease specialists, neurologists, transplant surgeons, etc.).

**Please note:** Only physicians may be awarded **AMA PRA Category 1 Credit™** by accredited providers. All other non-physician health professionals will receive attendance. For CME, physicians must always be the primary target audience for a continuing medical education activity.

<table>
<thead>
<tr>
<th>Step #2</th>
<th>What is/are the primary target audience(s) that will help close the identified educational gap(s)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Division of Urology Faculty – Department of Surgery</td>
</tr>
<tr>
<td></td>
<td>2. Oconee Urology Medical Staff</td>
</tr>
<tr>
<td></td>
<td>3.</td>
</tr>
</tbody>
</table>

Revised August 1, 2014
Step 3: Specifying the Pertinent ABMS/ACGME Competency

The American Board of Medical Specialties (ABMS), Institute of Medicine (IOM) Core Competencies, and Accreditation Council for Graduate Medical Education (ACGME) have determined that there are six critical competencies that physicians must master in order to provide optimal clinical care. The 3rd step in the CME planning process is to specify which of the following competencies is most relevant to a gap(s) that has/have been identified: (1) patient care; (2) medical knowledge; (3) practice-based learning and improvement; (4) interpersonal and communication skills; (5) professionalism; and (6) systems-based practice. If you would like more information about the six ABMS competencies, please see the following website:


<table>
<thead>
<tr>
<th>Step #3</th>
<th>ACCME C6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which of the ABMS/ACGME competencies is most relevant to the gap(s) that were identified?</td>
<td></td>
</tr>
<tr>
<td>✓ Patient care</td>
<td></td>
</tr>
<tr>
<td>✓ Medical knowledge</td>
<td></td>
</tr>
<tr>
<td>✓ Practice-based learning and improvement</td>
<td></td>
</tr>
<tr>
<td>✓ Interpersonal and communication skills</td>
<td></td>
</tr>
<tr>
<td>☐ Professionalism</td>
<td></td>
</tr>
<tr>
<td>✔ Systems-based practice</td>
<td></td>
</tr>
</tbody>
</table>

Step 4: Identifying Potential Partners and Allies

Closing the identified gap may be a daunting task. It is worth your time to consider whether other groups or organizations are working on the same issue. If so, joining forces with them may help you accomplish your common goal of closing the identified gap(s). Working with other groups may increase access to scarce resources, improve efficiency, and produce synergistic partnerships. Importantly, these potential partners may be internal or external to your organization or unit. Step 4 of the planning process involves identifying who these potential partners are.

<table>
<thead>
<tr>
<th>Step #4</th>
<th>ACCME C18, C19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there other initiatives within the institution working on the same issue? Do you know of other institutions that could be potential partners in working on this issue? Please list them below.</td>
<td></td>
</tr>
<tr>
<td>All divisions within the department of surgery hold journal club meetings.</td>
<td></td>
</tr>
<tr>
<td>Could these internal or external groups help address or remove barriers? If so, how?</td>
<td></td>
</tr>
<tr>
<td>Holding in evening to allow better participation</td>
<td></td>
</tr>
</tbody>
</table>
Step 5: Identifying Non-Educational Strategies

Numerous research studies have shown that CME interventions can increase competency, influence physician behavior, and/or improve patient outcomes. These findings were confirmed in a 2007 report by the Agency for Healthcare Research and Quality [Evidence Report / Technology Assessment; Number 149: AHRQ, 2007]. Nevertheless, education of health professionals is only one strategy that should be used to improve patient safety and healthcare quality. Importantly, there are many non-educational strategies that may play a crucial role in improving quality. This is especially true when one considers the gaps that can best be addressed with “system-level” interventions. As such, step 5 involves the identification of non-educational strategies that may help close the identified gap(s).

Are there non-educational strategies (e.g., patient reminders, order sets, computer training check sheets, guidelines, pocket cards, etc.) that are currently being used to close the identified gap(s)? If not, what kind of non-educational strategies could be created/used?

No

Step 6: Determining the Appropriate Evaluation Methodology

In order to determine whether the identified gap(s) has/have been closed, the CME activity must be evaluated. Similarly, the evaluation methodology must match the type of gap that was initially identified in step 1. For example, an activity designed to change the behavior of a physician should not be limited to a post-activity survey that only asks whether participants were satisfied with the quality of the handout materials.

To that end, a useful paradigm that is used in educational circles to measure educational impact involves various levels of evaluation. The ten levels are as follows: (1) learner participation; (2) learner satisfaction; (3) learner knowledge; (4) learner learning, measured before and after an educational intervention; (5) learner competence or ability, measured by a variety of techniques that determine whether a physician can apply the knowledge they have in the care of patients (i.e., this knowledge in practice can be determined by questions that measure application, case-
Form 3

based assessments, and/or simulations); (6) self-reported learner behavioral change, typically determined by participants filling out an “intent-to-change” form immediately following an educational activity, followed by a questionnaire or interview a few months later; (7) documented learner change in behavior, determined by a third party that measured actual behavior both before and after an educational intervention; (8) impact on individual patients, as measured by health outcomes on specific patients; (9) impact on patient populations, as measured by health outcomes on a patient or population cohort; and (10) the cost of the educational intervention, better known as the return on education (ROE).

The first part of step 6 of the planning process requires that you specify which level of educational evaluation would best determine whether the CME activity has closed the identified gap(s) you identified in step 1 in this document. The second part of step 6 involves the selection of one or more tools that will be used to determine whether or not the gap(s) has/have been closed after the intervention is complete.

1. Which of the ten levels of educational evaluation described above will best determine whether your educational activity has closed the identified gap(s)? GHS requires that CME activities measure Level 1 (participation) as well as Level 5 (competence), Level 6 (self-reported learner behavior change), Level 7 documented learner change in behavior, Level 8 (impact on individual patients), or Level 9 (impact on populations). You can check all that apply.

- (Level 1) Participation
- (Level 5) Learner competence or ability
- (Level 6) Self-reported learner behavioral change
- (Level 7) Documented learner change in behavior
- (Level 8) Impact on individual patients
- (Level 9) Impact on patient populations

2. What type of evaluation method/tool(s) will you use to determine whether the identified gap(s) has/have been closed? The tool must be able to measure Level 1 as well as Level 5, Level 6, Level 7, Level 8, or Level 9. Do you plan on using this/these tool(s) on every participant or a sample of the learners?

The application of research to our day to day clinical practice
Step 7: Determining the Desired Results, Learning Objectives and Content of the CME Activity

In steps 2 and 3, the target audience and pertinent ABMS/ACGME competency were identified. Subsequent steps involved the identification of non-educational interventions and potential allies that could help close the identified gap(s). Step 6 involved the identification of an appropriate evaluation methodology that will be used to judge whether the activity has successfully closed the identified gap(s). In step 7, the desired results, learning objectives and content of the CME activity are determined.

Importantly, this step has been deliberately placed at this stage in the planning process. In other words, **the identified gap(s) and the issues identified in previous steps should always be considered BEFORE the learning objectives and educational content are decided.**

Learning objectives can be thought of as “stepping stones” that help learners understand the nature of the identified gap(s). Well thought out learning objectives also serve as a guide to instructors so that they create content that will help learners close the identified gap(s). As such, objectives should contain action verbs and criteria that help activity planners evaluate whether the gap(s) was/were closed (e.g., whether the activity helped improve competency, influence physician behavior, and/or improve patient outcomes). **Moreover, planners should present the learning objectives to instructors and authors, not vice versa.**

Similarly, the content should reflect the premises outlined in the learning objectives. In turn, the content should be dictated by the need to close the identified gap(s). In other words, CME planners for your department should direct instructors to address the need(s) identified in step 1 (i.e., the cause that is responsible for the gap in optimal care). Faculty may be actively involved in the process of content creation; however, they should never lose sight of what the planners are trying to achieve (i.e., helping the learners close the identified gap by addressing the need to improve knowledge, enhance competence, influence behavior, and/or improve patient outcomes).

In addition, the creation of CME content must strictly adhere to all pertinent ACCME Essential Areas and the Standards for Commercial Support. **To that end, GHS only sponsors CME activities that promote improvements or quality in healthcare and not the proprietary interests of any commercial organization.** All relevant financial relationships with commercial interests must be disclosed to the GHS - CME department so that methods to resolve any conflicts of interest may be implemented prior to the CME activity taking place. Further, the management of any commercial support must strictly adhere to the Standards for Commercial Support. In all cases, education is separated from promotion. Disclosure to the learners of relevant financial relationships and any commercial support of the activity must also occur.

**Step #7**

A. Based on the identified gap(s) as well as the cause for the gap that you discovered through the needs assessment analysis, what are the desired results of the CME activity? Based on this answer, what is the content you want to cover?
To familiarize ourselves with current urological literature and research.

**B.** Based on the identified gap(s) and the desired result(s), what is/are the activity objective(s)?

To critically appraise journal articles.

**C.** How does the content relate to the current or potential scope of practice of the physician target audience?

Articles scheduled to review are those applicable to our clinical practice.

**Step 8: Selecting the Appropriate Educational Methodology**

Importantly, the educational methodology should reflect the gap(s) identified in step 1, the evaluation methodology chosen in step 6, as well as the desired results, learning objectives, and the content chosen in step 7. Whenever possible, adult learning principles (as well as the physician learning and change process) should be taken into account when selecting appropriate educational methodology.

**A.** Based on the previous steps, what is/are the right educational format(s) to use for the activity? What type of activity will it be (i.e., live activity, enduring material, internet, performance improvement, internet point of care, etc.)? Why?

Live activity
**B.** What will be the educational design of the activity (e.g., presentation, case-based, round table, simulation, etc.)? Consider adult learning principles and the identified gap(s).

Present journal articles – round table discussion

**C.** Is the educational format appropriate to the setting, your objectives, and your desired result(s)?

Yes

**D.** How do the educational format/methodology and design components of the CME activity support the desired results and learning objectives outlined in step 7?

Through analyzing study design methods and critically appraising conclusion.

---

**Step 9: Selecting Speakers**

Speakers should be selected only after the content has been chosen and the educational methodology has been determined. **You should select speakers that are best prepared to teach the activity that you have planned, not vice versa.** Criteria to consider when instructors are selected might include the following: demonstrated expertise in the content area selected; ability to communicate effectively with the target audience; and willingness to meet the educational needs that the planning committee has identified. In the end, speaker should understand what the purpose of the CME activity is (i.e., to improve competence, influence behavior, and/or to improve patient outcomes). **Please note:** All speakers are required to complete CME documentation. All external speakers must complete an entire CME package. Please contact the CME Coordinator to make arrangements to collect all the necessary paperwork for your speakers. **The CME department will not award CME credit for any activities that fail to complete all the appropriate CME forms prior to the event.**

Revised August 1, 2014
Step 10: Describe your CME activity

The final step is to simply describe, in your own words, what you envision for your CME activity.

Discuss relevant journal club articles – analyze the study design, methods, and conclusions

Thank you for your diligence in planning a CME activity of excellence. Your work is greatly appreciated by Greenville Health System and the Continuing Medical Education Department.

The following items must be attached to this application in order to be submitted for approval:

☑ Complete and attach: Copies of all Planning Committee Member CV

☐ Copies of all speaker CV/Bios

☑ Copies of Planning Committee Member disclosure forms on file in CME office

☑ Copies of two sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc).

☑ A copy of the rough draft of the agenda (including introduction time, breaks, etc.)

Revised August 1, 2014
✓ A copy of the tentative budget typed up.

In addition, one person must be identified as a person of contact for the CME Department to make initial contact. Also, this identified person will be responsible for ensuring all required paperwork has been turned in to the CME Department. Please list the name and phone number of this individual: __Lynn Gorfine ext 5-6338______________

Medical Director responsible for activity: Please check to see that all required attachments (listed above) are included with this completed application form.

If all the attachments are included:

Please Sign Here: _______________

List the Planning Committee members and their respective institutional affiliation:

<table>
<thead>
<tr>
<th>Name</th>
<th>Institutional Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly Maloney, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Kimberly Burgess, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Erik Busby, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>R Douglas DeVore, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>William Flanagan, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Lawrence Hill Jr, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Charles Marguet, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Patrick Springhart, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Matthew Young, MD</td>
<td>GHS</td>
</tr>
</tbody>
</table>

Please allow up to 1 month for approval of your CME activity.

If you have any questions, please feel free to contact:

Rachel Andes– CME Coordinator
Greenville Health System
701 Grove Road
Greenville, South Carolina 29605
(864) 455-6478

Sally Cade – CME Coordinator
Greenville Health System
701 Grove Road
Greenville, South Carolina 29605
(864) 455-3552
scafe@ghs.org

Revised August 1, 2014
# CME Application Review Summary Sheet

**Activity Name:** Urology Journal Club  
**Date:** 5/4/16  
**Sally Cole**

<table>
<thead>
<tr>
<th>Application content</th>
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</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A - ACCME C2</td>
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<td>B - ACCME C2, C3</td>
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<tr>
<td>C - ACCME C18-19</td>
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<td>D - ACCME C2</td>
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<tr>
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<td>Step 3</td>
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<td>1. ACCME C11</td>
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<td>C - ACCME C3, C4</td>
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<tr>
<td>Step 8</td>
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<tr>
<td>A - ACCME C3, C5</td>
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<td>B - ACCME C3, C5</td>
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<td>C - ACCME C5</td>
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<td>D - ACCME C5</td>
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<td>Step 9</td>
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<tr>
<td>ACCME C3, C5</td>
<td>✔</td>
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<tr>
<td>Step 10</td>
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<table>
<thead>
<tr>
<th>Needs/Gap Documentation</th>
<th>Complete</th>
<th>Needed</th>
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<tbody>
<tr>
<td>Item 1</td>
<td>✔</td>
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<td>Item 2</td>
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<tr>
<td>Agenda</td>
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<td>Complete</td>
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<td>Budget</td>
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<td></td>
<td>Complete</td>
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</table>

<table>
<thead>
<tr>
<th>Copies of all Planning Committee Member CV</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>All planning committee disclosures are on file</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>All CV's are attached to application</td>
<td>✔</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Copies of all speaker CV/Bios</th>
<th>Yes</th>
<th>No</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Copies of 2 sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc.)</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Board of Urology MOC requirement 90 cme</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comments:</th>
</tr>
</thead>
</table>

Revised 8/1/14  
www.ghs.org/CME  
701 Grove Rd • c/o Continuing Medical Education • Greenville, SC 29605-5601 • (864) 455-3546-Main Line
AGENDA:

Urology Journal Club Meeting
Offsite
Last Monday of Every Other Month
(starting February 29, 2016)

1. Review Journal Articles
2. Round table discussion

Facilitator: Dr. Kelly Maloney
BUDGET: Urology Journal Club Meeting

Dinner for approximately 20 people at a restaurant in Greenville.

Cost runs: $500-900 per month
American Board of Urology

Pay Annual Certificate Fee Here

Maintenance of Certification

Beginning in 2007, the Board joins the 23 other member boards of the American Board of Medical Specialties (ABMS) in implementing Maintenance of Certification (MOC). The MOC process will extend over a ten-year period, with some requirements in the process to be completed every two years. They include documenting unrestricted medical licensure, completion of Practice Assessment Protocols (PAPs); documentation of CME credits, satisfactory peer review, and an adequate practice log submission, culminating with a computer-based examination at the end of Level 4.

It is hoped that MOC will ultimately have several tangible benefits for urologists including ease of relicensure by state medical boards and recredentialing by local hospitals and other health systems, and reduction in malpractice premiums. The ABMS is actively working with other agencies including the Federation of State Medical Boards to realize these benefits.

In addition, MOC should provide benchmarks for improving care and may serve to enhance patient satisfaction with physicians in the process. It is also possible that MOC may dovetail nicely with efforts directed toward pay for performance (P4P) in that the criteria developed for P4P by groups like the AUA may be the same criteria used for MOC. What is most clear now is that agencies like Medicare, Medicaid, etc. are increasingly interested not only in knowing what a physician knows, but also what he/she does in his/her practice.

MOC Login Only

User Name:

Password:

Login | Log Off

600 Peter Jefferson Parkway, Suite 150, Charlottesville, VA 22911

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https://www.abu.org/maintenanceOfCertification.aspx

10/15/2015
Maintenance of Certification: Overview

Beginning in 2007, those doctors who become certified, recertified, or subspecialty certified will enter a process of Maintenance of Certification (MOC). MOC is designed to evaluate the continued competence of a Diplomate. MOC was developed by the American Board of Medical Specialties (ABMS) and its 24 member boards and has been supported by the Accreditation Council for Graduate Medical Education (ACGME), the American Medical Association (AMA), the Federation of State Medical Boards (FSMB), and many other organizations.

The recertification/MOC process will extend over a ten year period with some requirements in the process to be completed every two years. A chart showing the requirements appears here. The current recertification process will be merged into Maintenance of Certification as all time-limited diplomates complete recertification.

Schedule and Fees

Beginning in 2009, a $200 annual certificate fee is charged to every practicing ABU diplomate, replacing the recertification and maintenance of certification applications fees.

Application Documents

Application documents will be available on the secure portion of the website in April for those diplomates who are eligible to apply. Information about the process is available in the Information for Applicants for Maintenance of Certification handbook.

Scoring

The method used to determine a passing score on the Maintenance of Certification Examination is based on criterion reference testing. Criterion reference testing uses a benchmark examination to establish a performance which all candidates must meet. Examinations are compared to the benchmark standard and the passing score varies according to the difficulty. The probability of passing remains constant, and the examination process provides a uniform opportunity to pass from one year to the next. In theory, all who take the examination could pass; there is no mandatory failure rate. On average, approximately 98% of candidates pass the exam.
<table>
<thead>
<tr>
<th>Requirements</th>
<th>Level 1 (year 2)</th>
<th>Level 2 (year 4)</th>
<th>Level 3 (year 6)</th>
<th>Level 4 (years 8-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete application online</td>
<td>yes</td>
<td>supplemental application</td>
<td>supplemental application</td>
<td>supplemental application</td>
</tr>
<tr>
<td>ABU office verify licensure</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>ABU office complete peer review</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Candidate: Complete online Practice Assessment Protocol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candidate: Submit documentation of 90 hours of CME</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>* Candidate: Complete Patient Safety Module (*proposed implementation in 2013)</td>
<td>yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Candidate: Complete Ethics Module (*proposed implementation in 2013)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candidate: Submit 6 month electronic practice log</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Candidate: Computer-based closed-book exam</td>
<td></td>
<td></td>
<td></td>
<td>yes</td>
</tr>
</tbody>
</table>
TO: CME Committee

FROM: Patrick Springhart, MD

Date: November 10, 2015

Subject: Needs analysis for CME Journal Club Meeting

Urology is an ever changing area of medicine. Not only do we have new medications on the market but also immune modulators, vaccines, notwithstanding all the technological changes in surgery. As a division, we have discussed how important it is to keep current and as a result have been holding Urological Journal Club meetings for the past three years. It is of upmost importance to continue these meetings. We will continue to review peer reviewed articles along with the most up-to-date guidelines pertaining to Urology. My thanks to Dr. Kelly Maloney for spearheading the CME for Journal Club Meetings.
Continuing Medical Education Application

Date: 10/30/15

Proposed Title of Activity: Urology Morbidity and Mortality Conference

Proposed Date of Activity: 3rd Wed every other month

Time: 7:00-8:00 am

Location of Activity: ST22

Medical Dir. responsible for activity: Kelly Maloney, MD

Phone Number: 455-6338 Fax: _455-1320__ Email: kmaloney@ghs.org

Administrative Contact: Lynn Gorfine

Phone Number: 455-6338 Fax: _455-1320__ Email: lgorfine@ghs.org

Affiliation: GHS

Address: 701 Grove Rd.

City: Greenville  State: SC  Zip: 29605

Commercial/Financial Support [if applicable]: Yes ________ No: ___ x ___

(Any source of funds not provided from GHS operational accounts)

If yes, please provide source name: ________________________________

Credits requested ______

(add minutes of education activities and divide by 60. Do not include breaks, introduction times, etc.)

Occurrence Every other month # per year

(i.e. weekly, monthly, etc.)

This application is designed to assist planners in working through the steps that are required by the Accreditation Council for Continuing Medical Education (ACCME), the South Carolina Medical Association (SCMA) and Greenville Health System (GHS) prior to approval of CME activities sponsored by Greenville Health System.

All of the steps must be taken independently of commercial interests. Further, all persons who are in a position to control CME content must disclose all relevant financial relationships with regards to commercial interest to the CME Department. The GHS-CME Department must implement mechanisms to identify and resolve all conflicts of interest before any CME activity occurs.

Revised August 1, 2014
**Step 1: Identifying the educational gap(s)**

The planning process begins by identifying at least one educational gap. This educational gap can be expressed as the difference between what actually occurs and what should occur to give the best possible care to our patients.

The person filling out this application must (a) describe the identified gap(s); (b) determine whether closing the identified gap(s) will improve knowledge, enhance competency, and/or change physicians behavior; (c) identify barriers that may need to be overcome to close the gap(s); and (d) describe how the gap was analyzed so the cause of the problem is being addressed through CME.

The latter is termed “needs assessment” and must include at least two different sources. For example, scientific evidence for the literature; opinion from clinical or scientific experts; information from the general public, the media and/or other environmental sources; observed data from local or national databases; and/or survey from past participants or prospective learners. Whenever possible, it is important to utilize our Quality Initiatives and other forms of organizational data to address your department needs assessment.

<table>
<thead>
<tr>
<th>A. What is/are the educational gap(s)? How was this gap (were these gaps) identified? What is/are the quality gap(s) that this CME activity is Designed to address?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational gaps include identifying areas where care can be improved by reviewing surgical complication and deaths.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. What is the reason that the gap exists? Is it because physicians do not know something (i.e., there is a knowledge deficit)? Is it because physicians are not able to do something (i.e., there is a competency deficit)? Is it because the physician did something, or failed to do something (i.e., there is sub-optimal physician behavior)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gap may exist because of knowledge deficit / competency deficit or sub-optimal physician behavior.</td>
</tr>
</tbody>
</table>

Revised August 1, 2014
C. What are the barriers facing the learners who are trying to close the identified gap(s)?

Lack of time to carry out continuing education

D. What sources and kinds of information (i.e., needs assessment data) did you use to figure out the cause of the gap? Please attach documentation of at least two sources that were used to identify the learning gap(s).

1. American Board of Surgery – Maintenance of Certification
2. Letter from Division Chief

Step 2: Identifying the Target Audience

CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients or the profession. CME activities are intended to increase competency, influence physician behavior, and/or improve patient outcomes. The major reason for planning your CME activity should be to close the gap(s) you identified in Step 1.

The next step is to identify the target audience for your proposed activity. By clearly identifying the specific target audience for the proposed CME activity, you will be able to plan a learning process that will enable the learners to close the identified gap(s).

You should specify both the general type of health professional that you want to target (i.e., physicians, nurses, pharmacists, etc.) as well as the specific type of learner within those broad categories (e.g., primary care physicians, infectious disease specialists, neurologists, transplant surgeons, etc.).
Please note: Only physicians may be awarded AMF PRA Category 1 Credit™ by accredited providers. All other non-physician health professionals will receive attendance. For CME, physicians must always be the primary target audience for a continuing medical education activity.

Step 3: Specifying the Pertinent ABMS/ACGME Competency

The American Board of Medical Specialties (ABMS), Institute of Medicine (IOM) Core Competencies, and Accreditation Council for Graduate Medical Education (ACGME) have determined that there are six critical competencies that physicians must master in order to provide optimal clinical care. The 3rd step in the CME planning process is to specify which of the following competencies is most relevant to a gap(s) that has/have been identified: (1) patient care; (2) medical knowledge; (3) practice-based learning and improvement; (4) interpersonal and communication skills; (5) professionalism; and (6) systems-based practice. If you would like more information about the six ABMS competencies, please see the following web site: http://www.abms.org/Maintenance_of_Certification/MOC_competencies.aspx

Step 4: Identifying Potential Partners and Allies

Closing the identified gap may be a daunting task. It is worth your time to consider whether other groups or organizations are working on the same issue. If so, joining forces with them may help you accomplish your common goal of closing the identified gap(s). Working with other groups may increase access to scarce resources, improve efficiency, and produce synergistic partnerships. Importantly, these potential partners may be internal or external to your organization or unit. Step 4 of the planning process involves identifying who these potential partners are.

Revised August 1, 2014
All divisions within the department of surgery have M&M conferences.

Could these internal or external groups help address or remove barriers? If so, how?

N/A

Step 5: Identifying Non-Educational Strategies

Numerous research studies have shown that CME interventions can increase competency, influence physician behavior, and/or improve patient outcomes. These findings were confirmed in a 2007 report by the Agency for Healthcare Research and Quality [Evidence Report / Technology Assessment; Number 149: AHRQ, 2007]. Nevertheless, education of health professionals is only one strategy that should be used to improve patient safety and healthcare quality. Importantly, there are many non-educational strategies that may play a crucial role in improving quality. This is especially true when one considers the gaps that can best be addressed with “system-level” interventions. As such, step 5 involves the identification of non-educational strategies that may help close the identified gap(s).

Are there non-educational strategies (e.g., patient reminders, order sets, computer training check sheets, guidelines, pocket cards, etc.) that are currently being used to close the identified gap(s)? If not, what kind of non-educational strategies could be created/used?

No

Revised August 1, 2014
Step 6: Determining the Appropriate Evaluation Methodology

In order to determine whether the identified gap(s) has/have been closed, the CME activity must be evaluated. Similarly, the evaluation methodology must match the type of gap that was initially identified in step 1. For example, an activity designed to change the behavior of a physician should not be limited to a post-activity survey that only asks whether participants were satisfied with the quality of the handout materials.

To that end, a useful paradigm that is used in educational circles to measure educational impact involves various levels of evaluation. The ten levels are as follows: (1) learner participation; (2) learner satisfaction; (3) learner knowledge; (4) learner learning, measured before and after an educational intervention; (5) learner competence or ability, measured by a variety of techniques that determine whether a physician can apply the knowledge they have in the care of patients (i.e., this knowledge in practice can be determined by questions that measure application, case-based assessments, and/or simulations); (6) self-reported learner behavioral change, typically determined by participants filling out an “intent-to-change” form immediately following an educational activity, followed by a questionnaire or interview a few months later; (7) documented learner change in behavior, determined by a third party that measured actual behavior both before and after an educational intervention; (8) impact on individual patients, as measured by health outcomes on specific patients; (9) impact on patient populations, as measured by health outcomes on a patient or population cohort; and (10) the cost of the educational intervention, better known as the return on education (ROE).

The first part of step 6 of the planning process requires that you specify which level of educational evaluation would best determine whether the CME activity has closed the identified gap(s) you identified in step 1 in this document. The second part of step 6 involves the selection of one or more tools that will be used to determine whether or not the gap(s) has/have been closed after the intervention is complete.

1. Which of the ten levels of educational evaluation described above will best determine whether your educational activity has closed the identified gap(s)? GHS requires that CME activities measure Level 1 (participation) as well as Level 5 (competence). Level 6 (self-reported learner behavior change), Level 7 documented learner change in behavior, Level 8 (impact on individual patients), or Level 9 (impact on populations). You can check all that apply.
✓ (Level 1) Participation
☐ (Level 5) Learner competence or ability
✓ (Level 6) Self-reported learner behavioral change
☐ (Level 7) Documented learner change in behavior
✓ (Level 8) Impact on individual patients
☐ (Level 9) Impact on patient populations

2. What type of evaluation method/tool(s) will you use to determine whether the identified gap(s) has/have been closed? The tool must be able to measure Level 1 as well as Level 5, Level 6, Level 7, Level 8, or Level 9. Do you plan on using this/these tool(s) on every participant or a sample of the learners?

Assess whether our physicians practice patterns are changed by evaluation/discussing adverse outcomes.

Step 7: Determining the Desired Results, Learning Objectives and Content of the CME Activity

In steps 2 and 3, the target audience and pertinent ABMS/ACGME competency were identified. Subsequent steps involved the identification of non-educational interventions and potential allies that could help close the identified gap(s). Step 6 involved the identification of an appropriate evaluation methodology that will be used to judge whether the activity has successfully closed the identified gap(s). In step 7, the desired results, learning objectives and content of the CME activity are determined.

Importantly, this step has been deliberately placed at this stage in the planning process. In other words, the identified gap(s) and the issues identified in previous steps should always be considered BEFORE the learning objectives and educational content are decided.

Learning objectives can be thought of as “stepping stones” that help learners understand the nature of the identified gap(s). Well thought out learning objectives also serve as a guide to instructors so that they create content that will help learners close the identified gap(s). As such, objectives should contain action verbs and criteria that help activity planners evaluate whether the gap(s) was/were closed (e.g., whether the activity helped improve competency, influence physician behavior, and/or improve patient outcomes). Moreover, planners should present the learning objectives to instructors and authors, not vice versa.

Revised August 1, 2014
Similarly, the content should reflect the premises outlined in the learning objectives. In turn, the content should be dictated by the need to close the identified gap(s). In other words, CME planners for your department should direct instructors to address the need(s) identified in step 1 (i.e., the cause that is responsible for the gap in optimal care). Faculty may be actively involved in the process of content creation; however, they should never lose sight of what the planners are trying to achieve (i.e., helping the learners close the identified gap by addressing the need to improve knowledge, enhance competence, influence behavior, and/or improve patient outcomes).

In addition, the creation of CME content must strictly adhere to all pertinent ACCME Essential Areas and the Standards for Commercial Support. To that end, GHS only sponsors CME activities that promote improvements or quality in healthcare and not the proprietary interests of any commercial organization. All relevant financial relationships with commercial interests must be disclosed to the GHS - CME department so that methods to resolve any conflicts of interest may be implemented prior to the CME activity taking place. Further, the management of any commercial support must strictly adhere to the Standards for Commercial Support. In all cases, education is separated from promotion. Disclosure to the learners of relevant financial relationships and any commercial support of the activity must also occur.

A. Based on the identified gap(s) as well as the cause for the gap that you discovered through the needs assessment analysis, what are the desired results of the CME activity? Based on this answer, what is the content you want to cover?

Review adverse patient outcomes

B. Based on the identified gap(s) and the desired result(s), what is/are the activity objective(s)?

Critically evaluate our practice patterns

C. How does the content relate to the current or potential scope of practice of the physician target audience?

Revised August 1, 2014
Content is our patient population

**Step 8: Selecting the Appropriate Educational Methodology**

Importantly, the educational methodology should reflect the gap(s) identified in step 1, the evaluation methodology chosen in step 6, as well as the desired results, learning objectives, and the content chosen in step 7. Whenever possible, adult learning principles (as well as the physician learning and change process) should be taken into account when selecting appropriate educational methodology.

<table>
<thead>
<tr>
<th>A. Based on the previous steps, what is/are the right educational format(s) to use for the activity? What type of activity will it be (i.e., live activity, enduring material, internet, performance improvement, internet point of care, etc.)? Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live Activity</td>
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<tr>
<th>B. What will be the educational design of the activity (e.g., presentation, case-based, round table, simulation, etc.)? Consider adult learning principles and the identified gap(s).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case presentations</td>
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<tr>
<th>Step #8</th>
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<tbody>
<tr>
<td>C. Is the educational format appropriate to the setting, your objectives, and your desired result(s)?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. How do the educational format/methodology and design components of the CME activity support the desired results and learning objectives outlined in step 7?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows candid discussions and critique of our practice patterns</td>
</tr>
</tbody>
</table>
**Step 9: Selecting Speakers**

Speakers should be selected only after the content has been chosen and the educational methodology has been determined. **You should select speakers that are best prepared to teach the activity that you have planned, not vice versa.** Criteria to consider when instructors are selected might include the following: demonstrated expertise in the content area selected; ability to communicate effectively with the target audience; and willingness to meet the educational needs that the planning committee has identified. In the end, speaker should understand what the purpose of the CME activity is (i.e., to improve competence, influence behavior, and/or to improve patient outcomes). **Please note:** All speakers are required to complete CME documentation. All external speakers must complete an entire CME package. Please contact the CME Coordinator to make arrangements to collect all the necessary paperwork for your speakers. **The CME department will not award CME credit for any activities that fail to complete all the appropriate CME forms prior to the event.**

<table>
<thead>
<tr>
<th>Step #9</th>
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</thead>
<tbody>
<tr>
<td>Who are the right faculty to cover this content? Do you want them to focus on transfer of information (i.e., lectures and monographs), techniques to overcome gaps in competence (e.g., algorithms and case-based discussions), or strategies to overcome system problems (e.g., guidelines, policies, and toolkits)?</td>
</tr>
</tbody>
</table>

We all present out complications. Faculty in division of Urology.

**Step 10: Describe your CME activity**

The final step is to simply describe, in your own words, what you envision for your CME activity.

1. Discuss our surgical complications and deaths for the specific purpose of identifying areas where can be approved.
2. To discover system issues that can be addressed to improve quality of care.
Form 3

Thank you for your diligence in planning a CME activity of excellence. Your work is greatly appreciated by Greenville Health System and the Continuing Medical Education Department.

The following items must be attached to this application in order to be submitted for approval:

☐ Complete and attach: Copies of all Planning Committee Member CV

☐ Copies of all speaker CV/Bios

☑ Copies of Planning Committee Member disclosure forms **ON FILE W/ CME office**

☑ Copies of two sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc).

☑ A copy of the rough draft of the agenda (including introduction time, breaks, etc.)

☐ A copy of the tentative budget typed up.

In addition, one person must be identified as a person of contact for the CME Department to make initial contact. Also, this identified person will be responsible for ensuring all required paperwork has been turned in to the CME Department. Please list the name and phone number of this individual: ________________

**Medical Director responsible for activity:** Please check to see that all required attachments (listed above) are included with this completed application form.

If all the attachments are included:

**Please Sign Here:** ___________________________ 10/28/15

List the Planning Committee members and their respective institutional affiliation:

<table>
<thead>
<tr>
<th>Name</th>
<th>Institutional Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelly Maloney, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Kimberly Burgess, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Erik Busby, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>R Douglas DeVore, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>William Flanagan, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Lawrence Hill Jr, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Charles Marguet, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Patrick Springhart, MD</td>
<td>GHS</td>
</tr>
<tr>
<td>Matthew Young, MD</td>
<td>GHS</td>
</tr>
</tbody>
</table>

Revised August 1, 2014
**CME Application Review Summary Sheet**

**Activity Name:** Surgery M-T M Conf

<table>
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<th>Application content</th>
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<tr>
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<tr>
<td>B - ACCME C2, C3</td>
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<td>C - ACCME C18-19</td>
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<td>C - ACCME C3, C4</td>
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<tr>
<td>Step 8</td>
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<tr>
<td>A - ACCME C3, C5</td>
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<td>B - ACCME C3, C5</td>
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<td>C - ACCME C5</td>
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<tr>
<td>D - ACCME C5</td>
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<td>Step 9</td>
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<td>ACCME C3, C5</td>
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<td>Step 10</td>
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**Needs/Gap Documentation**

<table>
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<td>Item 2</td>
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**Agenda**

<table>
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<table>
<thead>
<tr>
<th>Budget</th>
<th>Complete</th>
<th>Needed</th>
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</table>

**Copies of all Planning Committee Member CV**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

All planning committee disclosures are on file in cme office.

**Copies of all speaker CV/Bios**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**Copies of 2 sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc).**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

American Board of Urology CME 90hrs Regime

Email from Patrick Speight, MD

**Comments:**

---

*Revised 8/1/14*

www.ghs.org/CME

701 Grove Rd • c/o Continuing Medical Education • Greenville, SC 29605-5601 • (864) 455-3546-Main Line
AGENDA:

Urology Morbidity and Mortality Conference

ST 22

3rd Wednesday of Every Other Month
(starting January 20, 2016)

1. Announcements/Research Trials
2. Review of deaths and complications
3. Review of Case Lists
4. Presentations

Facilitator: Dr. Kelly Maloney
NO BUDGET: Urology M&M Meeting

No food or beverage is served
American Board of Urology

Pay Annual Certificate Fee Here

Maintenance of Certification

Beginning in 2007, the Board joins the 23 other member boards of the American Board of Medical Specialties (ABMS) in implementing Maintenance of Certification (MOC). The MOC process will extend over a ten-year period, with some requirements in the process to be completed every two years. They include documenting unrestricted medical licensure, completion of Practice Assessment Protocols (PAPs), completion and documentation of CME credits, satisfactory peer review, and an adequate practice log submission, culminating with a computer-based examination at the end of Level 4.

It is hoped that MOC will ultimately have several tangible benefits for urologists including ease of relicensure by state medical boards and recredentialing by local hospitals and other health systems, and reduction in malpractice premiums. The ABMS is actively working with other agencies including the Federation of State Medical Boards to realize these benefits.

In addition, MOC should provide benchmarks for improving care and may serve to enhance patient satisfaction with physicians in the process. It is also possible that MOC may dovetail nicely with efforts directed toward pay for performance (P4P) in that the criteria developed for P4P by groups like the AUA may be the same criteria used for MOC. What is most clear now is that agencies like Medicare, Medicaid, etc. are increasingly interested not only in knowing what a physician knows, but also what he/she does in his/her practice.
American Board of Urology

Pay Annual Certificate Fee Here

Maintenance of Certification: Overview

Beginning in 2007, those doctors who become certified, recertified, or subspecialty certified will enter a process of Maintenance of Certification (MOC). MOC is designed to evaluate the continued competence of a Diplomate. MOC was developed by the American Board of Medical Specialties (ABMS) and its 24 member boards and has been supported by the Accreditation Council for Graduate Medical Education (ACGME), the American Medical Association (AMA), the Federation of State Medical Boards (FSMB), and many other organizations.

The recertification/MOC process will extend over a ten year period, with some requirements in the process to be completed every two years. A chart showing the requirements appears here. The current recertification process will be merged into Maintenance of Certification as all time-limited diplomats complete recertification.

Schedule and Fees

Beginning in 2009, a $200 annual certificate fee is charged to every practicing ABU diplomats, replacing the recertification and maintenance of certification applications fees.

Application Documents

Application documents will be available on the secure portion of the website in April for those diplomates who are eligible to apply. Information about the process is available in the Information for Applicants for Maintenance of Certification handbook.

Scoring

The method used to determine a passing score on the Maintenance of Certification Examination is based on criterion reference testing. Criterion reference testing uses a benchmark examination to establish a performance which all candidates must meet. Examinations are compared to the benchmark standard and the passing score varies according to the difficulty. The probability of passing remains constant, and the examination process provides a uniform opportunity to pass from one year to the next. In theory, all who take the examination could pass; there is no mandatory failure rate. On average, approximately 98% of candidates pass the exam.

600 Peter Jefferson Parkway, Suite 150, Charlottesville, VA 22911

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## MOC REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Level 1 (year 2)</th>
<th>Level 2 (year 4)</th>
<th>Level 3 (year 6)</th>
<th>Level 4 (years 8-9)</th>
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<tr>
<td>Complete application online</td>
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<td>ABU office verify licensure</td>
<td>yes</td>
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<tr>
<td>ABU office complete peer review</td>
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<tr>
<td>Candidate: Complete online Practice Assessment Protocol</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>Candidate: Submit documentation of 90 hours of CME</td>
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<td>yes</td>
<td>yes</td>
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<tr>
<td>* Candidate: Complete Patient Safety Module (<em>proposed implementation in 2013)</em></td>
<td>yes</td>
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<td>* Candidate: Complete Ethics Module (<em>proposed implementation in 2013)</em></td>
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<td>Candidate: Submit 6 month electronic practice log</td>
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<td>yes</td>
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<tr>
<td>Candidate: Computer-based closed-book exam</td>
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</table>
TO: CME Committee

FROM: Patrick Springhart, MD

Date: November 10, 2015

Subject: Needs analysis for CME M&M Meeting

Urology is an ever changing area of medicine. As a division, we have discussed how important it is to keep current with our specialty, literature as well as surgical outcomes and technical improvements. As a result we have been holding Urological M&M meetings for the past three years. It is of upmost importance to continue these meetings. We will continue to review morbidity and mortality cases along with the most up-to-date guidelines pertaining to urology.
Kimberly Lynn Burgess, MD
20 Claret Dr
Greenville, SC 29609
(864)238-5517
Email: kburgess2@ghs.org

Current & Prior Academic Rank and Position

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2013-Present</td>
<td>Urologist</td>
<td>Division of Urology, Department of Surgery, Greenville Health System</td>
</tr>
<tr>
<td>2014-Present</td>
<td>Clinical Assistant Professor</td>
<td>University of South Carolina School of Medicine, Greenville, SC</td>
</tr>
<tr>
<td>July 2011-June 2012</td>
<td>Instructor in Urology</td>
<td>College of Medicine, Mayo Medical School</td>
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Education

<table>
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<th>Date Range</th>
<th>Program</th>
<th>Institution</th>
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<tbody>
<tr>
<td>2012-2013</td>
<td>Fellowship, Voiding Dysfunction &amp; Female Urology</td>
<td>Director: Steven Siegel, MD, St Paul, Minnesota</td>
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<tr>
<td>2008-2012</td>
<td>Urology Residency</td>
<td>Mayo School of Graduate Medical Education, Rochester, Minnesota</td>
</tr>
<tr>
<td>2007-2008</td>
<td>General Surgery Internship</td>
<td>Mayo School of Graduate Medical Education, Rochester, Minnesota</td>
</tr>
<tr>
<td>2003-2007</td>
<td>Doctor of Medicine</td>
<td>University of South Florida College of Medicine, Tampa, Florida</td>
</tr>
<tr>
<td>1999-2003</td>
<td>B.S. Mathematical Sciences</td>
<td>Clemson University, Clemson, South Carolina</td>
</tr>
</tbody>
</table>

Academic Honors & Awards

<table>
<thead>
<tr>
<th>Year</th>
<th>Honor</th>
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<tbody>
<tr>
<td>2006</td>
<td>Alpha Omega Alpha (AOA)</td>
</tr>
<tr>
<td>2003</td>
<td>Summa cum laude with Honors</td>
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</table>

Licensure

<table>
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<tr>
<th>Date Range</th>
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<tbody>
<tr>
<td>2013-Present</td>
<td>South Carolina State License</td>
</tr>
<tr>
<td>2008-2014</td>
<td>Minnesota State License</td>
</tr>
<tr>
<td>2015-Present</td>
<td>Board Certified, American Board of Urology</td>
</tr>
</tbody>
</table>
**Publications:**

Burgess KL, Siegel SW: Chapter 4: Sacral Neuromodulation. Female Pelvic Surgery. Edited by F Firoozi.


**Other Presented Abstracts:**


Burgess, K, Lightner, D, Husmann, D: Management of the Neurologically Impaired Patient with Obesity and Severe Urinary Incontinence (Presented at SUFU 2011 & AUA 2011).


**Videos:**

Burgess KL, Siegel SW: Technique for Placement of Tined Sacral Lead and Implantable Neurostimulator (Presented at AUA 2013, Will be published with Female Pelvic Surgery: Chapter 4)

Other Research Experience & Presentations

<table>
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<th>Year</th>
<th>Title</th>
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<tbody>
<tr>
<td>2012</td>
<td>Prostate Cancer Treatment Options &amp; Management of Post-treatment Sequelae</td>
<td>SUNA Upper Midwest Conference</td>
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<tr>
<td>2011</td>
<td>Urinary Incontinence Following Prostate Cancer Treatment.</td>
<td>Mayo Prostate Cancer Support Group</td>
</tr>
<tr>
<td>2006</td>
<td>Research Assistant for Dr. Wade Sexton</td>
<td>USF Department of Urology</td>
</tr>
<tr>
<td>2002</td>
<td>Summer Research Intern for Philip Lazarus, PhD</td>
<td>H. Lee Moffitt Cancer Center &amp; Research Institute</td>
</tr>
<tr>
<td>2001</td>
<td>Howard Hughes Medical Institute Summer Research Intern</td>
<td>for Roger Wartell, PhD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Georgia Institute of Technology</td>
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Memberships

<table>
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<td>AUA</td>
<td>American Urological Association</td>
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<td>AMA</td>
<td>American Medical Association</td>
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<tr>
<td>SUFU</td>
<td>Society of Urodynamics, Female Pelvic Medicine &amp; Urogenital Reconstruction</td>
</tr>
<tr>
<td>SCMA</td>
<td>South Carolina Medical Association</td>
</tr>
</tbody>
</table>
Kelly Elizabeth Maloney
25 station court #405
Greenville, SC 29601
(864) 286-7570

EMPLOYMENT

Jan, 2012 – Present
Greenville Hospital System – University Medical Group
Greenville, South Carolina
Clinical Assistant Professor
Director of Medical Student Education for Urology

Columbia Urological Associates, PA
Columbia, South Carolina

2005 – 2009
Assistant Professor of Surgery
Division of Urology
Duke University Medical Center
Durham, North Carolina

2005 – 2009
Associate Residency Director
Division of Urology
Duke University Medical Center
Durham, North Carolina

1996 – 2005
Central Bucks Urology
Doylestown, Pennsylvania

EDUCATION

1991 – 1996
Resident in Urology
Duke University Medical Center
Durham, North Carolina

1990 – 1991
Resident in Surgery
Dalhousie University
Halifax, Nova Scotia, Canada

1989 – 1990
Rotating Internship
Dalhousie University
Halifax, Nova Scotia, Canada
Licentiate of the Medical Council of Canada

1985 – 1989
Medical School
Dalhousie University
Halifax, Nova Scotia, Canada

1978 – 1982
Honors Genetics Degree
University of Guelph
Guelph, Ontario, Canada

**PROFESSIONAL AFFILIATIONS**

American Urological Association – Active member

Southeastern Section – AUA – Active member

**RESEARCH EXPERIENCE**

March 13, 2014- present
Clinical Research – Co Investigator – Astellas Pharma Europe B.V.; A Randomized, Double-Blind, Parallel-Group, Placebo- and Active-Controlled, Multi-Center Study to Evaluate the Efficacy, Safety and Tolerability of Combinations of Solifenacin Succinate and Mirabegron Compared to Solifenacin Succinate and Mirabegron Monotherapy in the Treatment of Overactive Bladder [SYNERGY] (Enrollment closed)

September 18, 2015- present
Clinical Research – Co Investigator – BN ImmunoTherapeutics, Inc.; A Randomized, Double-blind, Phase 3 Efficacy Trial of PROSTVAC-V/F ± GM-CSF in Men With Asymptomatic or Minimally Symptomatic Metastatic, Castrate-Resistant Prostate Cancer (Enrollment closed)

January 9, 2015- present
Clinical Research – Co Investigator – Cook MyoSite, Incorporated; A Double-blind, Randomized, Controlled Trial Comparing the Safety and Efficacy of AMDC-USR with Placebo in Female Subjects with Stress Urinary Incontinence (Currently enrolling)

October 21, 2014- present
Clinical Research – Co Investigator – Exosome Diagnostics, Inc; Clinical Validation of a Urinary Exosome Gene Signature in Men Presenting for Suspicion of Prostate Cancer (Enrollment closed)

July 29, 2014- present
Clinical Research – Co Investigator – Genomic Health, Inc.; Genomic Markers in Transitional Cell Cancer of the Bladder, Renal Pelvis and Ureter: Sample Acquisition for Methods Development and Discovery (Currently enrolling)

March 2005 – 2009
Clinical Research – Principal Investigator – Duke University
A Prospective Study of Health Related Quality of Life in Patients Undergoing Radical Cystectomy for Muscle Invasive Bladder Cancer

July 1992 – June 1993
Clinical Research
Dr. P.J. Walther – Duke University Medical Center
HPV in bladder cancer
Androgen receptor mutations in Stage-D3 prostate cancer

Last updated 27Jul2015
July 1989 – May 1991  Clinical Research  
Drs. R. Norman and C.Y. Lee – Dalhousie University  
Cytogenetic abnormalities associated with renal cell carcinoma

June 1987 – September 1987  Summer Research Project  
Pediatric Hematology/Oncology – McMaster University  
Drs. R. Barr and D. Harnish  
Gene amplification in neuroblastoma patients-relationship to clinical staging and prognosis

May 1986 – August 1986  Summer Research Project  
Department of Genetics, The Hospital for Sick Children, Toronto  
Dr. R. Weksberg and S. Spielberg  
Gene transfer investigation of Bloom Syndrome lymphoblasts

September 1984 – May 1985  Department of Genetics, The Hospital for Sick Children, Toronto  
Dr. R. Weksberg  
Cytogenetic analysis of neuroblastoma cell lines

October 1983 – May 1984  The Atlantic Research Center for Mental Retardation, Halifax  
Dr. J.P. Welch  
Chromosome rearrangements in ataxia telangiectasia

May 1983 – September 1983  Summer Research Project  
The Hospital for Sick Children, Toronto  
Department of Genetics  
Dr. R. Weksberg  
Cytogenic analysis of Bloom Syndrome lymphoblasts

**AWARDS**

April 1990  Second Prize, Resident Research Competition  
Dalhousie University

August 1989  Dalhousie Medical Research Foundation Prize

June 1989  Dr. Mabel E. Goudge Price for Top Female of Graduating Class

Summer 1983, 1984, 1986  The Hospital for Sick Children Research Scholarship
PRESENTATIONS

March 2007  Southeastern Section of the American Urological Association  “Bladder Reconstruction Following Radical Cystectomy.”  Scales CD, Curtis LA, Maloney KE, Webster, G, Krupski T


April 1993  Southeastern Section of American Urological Association  Nashville, TN  “Squamous Cell Carcinoma of the Bladder: Polymerase Chain Reaction-Detected Oncogenic Human Papillomaviruses are Rarely Associated with Metaplastic Squamous Carcinogens.”  Maloney KE, Marks JR, Walther PJ


**PUBLICATIONS**


Last updated 27Jul2015
CHARLES G. MARGUET, M.D.
Greenville Hospital System Department of Surgery
1025 Verdae Blvd, Suite C
Greenville, SC  29607
cmarguet@ghs.org

MEDICAL EDUCATION

7/2003-2007 Duke University, Residency in Urologic Surgery
     Durham, North Carolina

7/2002-7/2003 Duke University, Residency in General Surgery
     Durham, North Carolina

     Naval Operational Medicine Institute
     Pensacola, Florida

6/1999-8/1999 Military Tropical Medicine Course
     Naval School of Health Sciences
     Bethesda, Maryland

6/1998-6/1999 National Naval Medical Center, Surgical Internship
     Bethesda, Maryland

8/1994 to 5/1998 Indiana University School of Medicine
     Indianapolis, Indiana

UNDERGRADUATE EDUCATION

8/1990 to 5/1994 Indiana University, Bloomington, IN
     Bachelor of Science, Biology

PROFESSIONAL CERTIFICATION

     USMLE Step 3, 5/1999: Passed
     USMLE Step 2, 8/1997: Passed
     USMLE Step 1, 6/1996: Passed
     ABU Qualifying Exam 8/2007: Passed
     ABU Certifying Exam 2/2009: Passed

PROFESSIONAL ORGANIZATIONS

2002-Present American Urological Association
2009-Present Western Section of AUA
2008-Present San Diego Urological Society
2005-Present Society of Government Service Urologists
HONORS/AWARDS

Residency
- McGovern Award (2005)
- Urology Academic Achievement Award (2006-2007)
- Oncology/Chemotherapy Award (2005)
- Gerald P. Murphy Scholar (2005)
- National Preceptorship in Laparoscopic Urology (2005)

Internship
- Outstanding Intern in General Surgery (1999)

Medical School
- Dr. James McCulloch Memorial Scholarship (1994)

Undergraduate
- Honors Division Undergraduate Research Grant (1993)
- Teaching Assistance Grant for Molecular Biology (1993)
- Phi Eta Sigma National Honor Society (1990-1994)
- Dean’s List (1990-1994)

EMPLOYMENT/ACTIVITIES

1/2015-Present
- Assistant Professor of Urology, University of South Carolina Greenville School of Medicine

8/2010-Present
- Assistant Professor of Surgery, Uniformed Services University of Health Sciences

8/2007-Present
- Staff Urologist, Naval Medical Center San Diego
  San Diego, California

- Urology House Staff, Duke University Medical Center
  Durham, North Carolina

7/1999-6/2002
- U.S. Naval Flight Surgeon, Miramar, California

- Extern, Emergency Department, St. Vincent’s Hospital,
  Indianapolis, IN

- Coordinator, Emergency Department Volunteer Program,
  Bloomington Memorial Hospital, Bloomington, Indiana


TEXTBOOK CHAPTERS:


Marguet CG and Preminger GM: Advances in intracorporeal lithotripsy. Turkish Urological Society, 2006

ACADEMIC PRESENTATIONS

James C. Kimbrough Urological Seminar, Society of Government Service Urologists, San Antonio, Texas, 2004:


American Urologic Association Annual Meeting, San Francisco, California, 2004:


Southeastern Section of the American Urologic Association, Oranjestad, Aruba, 2004:


**American Urologic Association Annual Meeting, San Antonio, Texas, 2005:**

1. James O L'Esperance*, Steven A Terranova, Yeh Hong Tan, W Patrick Springhart, **Charles G Marguet**, Jeffrey C Sung, Glenn M Preminger and David M Albala: Hand assisted laparoscopic nephrectomy: hand port and radially dilating trocar site complications.


3. James O L'Esperance*, W Patrick Springhart, Wesley Ekeruo, Michaella E Maloney, Yeh Hong Tan, Matthew D Young, **Charles G Marguet**, Ganesh V Raj, David M Albala and Glenn M Preminger: Ureteroscopic management of symptomatic renal calculi: do ureteral access sheaths improve stone free rates?


**James C. Kimbrough Urological Seminar, Society of Government Service Urologists, Savannah, Georgia, 2006:**

1. Charles G. Marguet, Judd W. Moul*, James M. Hotaling, Leon Sun, Thomas Polasick, Caryl Robertson, Daniel George, Craig Donatucci, David Albala, Michell Anscher, Phillip Dahm, and Phillip Walther: PSA Screening Threshold should be lower in men aged under 50.
Robert Douglas DeVore, M.D. F.A.C.S

DOB: November 8, 1953

Place of Birth: Charleston, South Carolina

Licensure: State of South Carolina #10196

Certification:

1980 Diplomate-National Board of Medical Examiners
1987 Diplomate-American Board of Urology
1987 Endoscopic Laser Lithotripsy
1989 Shock Wave Lithotripsy
1992 Laparoscopic Pelvic Lymphadenectomy
1993 Visual Laser Ablation of Prostate
1993 Contigen Injection for Incontinence
1998 Prostate brachy therapy
2005 Transobturator sling urethropexy
2006 Greenlight and Holmium Laser
2012 Hands-on Urologic Ultrasound – Rush University

Therapeutic Specialty: Urology

Medical Education:

06/77-08/77 Studied Pathology under Professor Neville Wolf
Middlesex Hospital
London, England

1975-1979 M.D. Degree
Medical College of Georgia

1979-1984 Residency-General Surgery-Urology
Medical College of Georgia

1985 Completed one year employment as Senior Registrar in Urology
Christchurch Hospital
Christchurch, New Zealand

Undergraduate Education:

1975 B.S. Degree
Clemson University
(Graduated with Highest Honors)
Robert Douglas DeVore, MD
Curriculum Vitae
Page 2

Professional Experience:

08/11-Present
Urologist – GHS Department of Surgery-Regional Urology
Greer Medical Office Building
340 Medical Parkway, Ste. 200, Greer, SC  29650

08/11-Present
Investigator – GHS Department of Surgery-Regional Urology
Greer Medical Office Building
340 Medical Parkway, Ste. 200, Greer, SC  29650

11/00-8/11
Investigator
Matrix Research, LLC
420 The Parkway, Bldg. C  Greer, SC  29650

05/00-12/02
Investigator
Radiant Research
Greer, SC  29651

08/98-05/00
Investigator
HillTop-MedQuest Research, Inc.
Greer, SC  29651

1992-08/98
Investigator
MedQuest, Inc., Centers for Research
Greer, SC  29651

1986-08/11
Private Practice-The Urology Group
420 The Parkway, Bldg. C
Greer, SC  29650

Hospital Affiliations:

Greenville Health System

Professional Affiliations:

Greenville County Medical Society
South Carolina Urological Society
Southeastern Section of the American Urological Association
American Urological Association
Fellow-American College of Surgeons
Previous 10 year Research Experience 2004-2014:

<table>
<thead>
<tr>
<th>Principal Investigator/Co-investigator</th>
<th>Sponsor/ Protocol #</th>
<th># Subjects Enrolled/# contracted for</th>
<th>Indication</th>
<th>Length of study participation</th>
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<tbody>
<tr>
<td>Co-Inv</td>
<td>Warner Chilcott/PR-01309</td>
<td>30/8</td>
<td>Erectile Dysfunction</td>
<td>12 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Warner Chilcott/PR-01409</td>
<td>24/8 (roll over from previous study)</td>
<td>Erectile Dysfunction</td>
<td>52 weeks</td>
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<td>Merck/MK-4618</td>
<td>5/3</td>
<td>Overactive Bladder</td>
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<td>Co-Inv</td>
<td>Endo/EN3350-302</td>
<td>1/2</td>
<td>Hypogonadism</td>
<td>24 weeks</td>
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<td>Co-Inv</td>
<td>Omnicare/FJ-US-SBCD</td>
<td>8/8</td>
<td>Stress Urinary Incontinence</td>
<td>1 year</td>
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<tr>
<td>Co-Inv</td>
<td>Watson/SI04009</td>
<td>12/8</td>
<td>Mens LUTS/BPH</td>
<td>unknown</td>
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<tr>
<td>Co-Inv</td>
<td>Watson/SI04011</td>
<td>8/8 Roll overs</td>
<td>Mens LUTS/BPH</td>
<td>1 year</td>
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<tr>
<td>Co-Inv</td>
<td>OrthoMcNeil/CAPSS 349</td>
<td>8/8</td>
<td>Chronic UTI</td>
<td>12 week</td>
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<tr>
<td>Co-Inv</td>
<td>Pfizer/A02210091022</td>
<td>4/6</td>
<td>Mens LUTS/BPH</td>
<td>unknown</td>
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<tr>
<td>Co-Inv</td>
<td>Aeterna Zentaris/AEZS-102-041</td>
<td>4 SF/PT decision to stop screening due to safety</td>
<td>Open label BPH</td>
<td>unknown</td>
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<tr>
<td>Co-Inv</td>
<td>Strak_campaign Pharma/ FOR01C</td>
<td>12/8</td>
<td>Hypogonadism</td>
<td>16 ish weeks</td>
</tr>
<tr>
<td>Co-Inv</td>
<td>Astellas/178-CL-074</td>
<td>9/8</td>
<td>OAB</td>
<td>12 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Astellas/178-CL-047</td>
<td>22/8</td>
<td>OAB</td>
<td>6 months</td>
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<tr>
<td>Co-Inv</td>
<td>Astellas/178-CL-049</td>
<td>17/8 Rollovers</td>
<td>OAB</td>
<td>1 year</td>
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<tr>
<td>Co-Inv</td>
<td>Pfizer/A091010</td>
<td>7/8</td>
<td>Interstitial Cystitis</td>
<td>3 months</td>
</tr>
<tr>
<td>Co-Inv</td>
<td>Sanofi Aventis/DR16271</td>
<td>2/3</td>
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<td>12 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Anteres/20070060</td>
<td>11/8</td>
<td>OAB</td>
<td>16 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Astellas/905-UC-010</td>
<td>7/8</td>
<td>Vesicare/OAB</td>
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<tr>
<td>Co-Inv</td>
<td>Watson/OG5009</td>
<td>13/8</td>
<td>OAB</td>
<td>12 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Hormos/101-50204</td>
<td>4/4</td>
<td>Hypogonadism</td>
<td>4 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Q-Med/3D S0201</td>
<td>9/4</td>
<td>Stress Incontinence</td>
<td>16 week</td>
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<tr>
<td>Co-Inv</td>
<td>Pfizer/A6121120</td>
<td>8/8</td>
<td>Mens LUTS/OAB</td>
<td>26 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Astellas/672-CL-035</td>
<td>7/8</td>
<td>Interstitial Cystitis</td>
<td>12 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>Medicinova/MN-001-CL-002</td>
<td>20/10</td>
<td>Interstitial Cystitis</td>
<td>12 weeks</td>
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<tr>
<td>Co-Inv</td>
<td>GlaxoSmith/ARI40006</td>
<td>4/4</td>
<td>Prostate Cancer</td>
<td>1 year</td>
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<tr>
<td>Co-Inv</td>
<td>Amgen/20040138</td>
<td>2/4</td>
<td>Prostate Cancer</td>
<td>1 year</td>
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<tr>
<td>Principal Inv</td>
<td>Merck/MK4618</td>
<td>4/6</td>
<td>OAB</td>
<td>12 week</td>
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<tr>
<td>Principal Inv</td>
<td>GP Pharma/GP/C/05/PRO</td>
<td>6/6</td>
<td>Prostate Cancer</td>
<td>1 year</td>
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<tr>
<td>Co-Inv</td>
<td>BNIT PRV-301</td>
<td>Enrolling/3</td>
<td>Prostate Cancer</td>
<td>1 year</td>
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<tr>
<td>Principal Inv</td>
<td>Astellas 178-CL-101</td>
<td>Enrolling/12</td>
<td>OAB</td>
<td>1 year</td>
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<tr>
<td>Principal Inv</td>
<td>Sophiris PRX302-3-01</td>
<td>Enrolling/5</td>
<td>BPH</td>
<td>1 year</td>
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<tr>
<td>Co-Inv</td>
<td>Cook Myosite 13-003</td>
<td>Enrolling/5</td>
<td>SUI</td>
<td>2 years</td>
</tr>
</tbody>
</table>
Lawrence King Hill, MD

Curriculum Vitae

University of South Carolina School of Medicine
Greenville Health System
University Medical Group
Department of Surgery Division of Urology

Education

July 1986 – June 1987 Fellow in Male Reproductive Medicine and Surgery
Baylor College of Medicine  Houston, TX

July 1983 – June 1986 Assistant in Department of Urology
George Washington School of Medicine  Washington, DC

July 1985 – June 1986 Chief Resident in Urology
George Washington University and Affiliated Hospitals

University Hospital – (Now, University of Florida  Jacksonville, FL)

August 1977 – May 1981 Doctor of Medicine
University of South Carolina of Medicine  Columbia, SC

August 1973 – May 1977 Bachelors of Science in Chemistry – MAGNA CUM LAUDE
Hampden-Sydney College  Hampden-Sydney, VA

Professional Societies

1991 – Present
Fellow American College of Surgeons
Member Society for Male Reproductive Medicine and Urology
Member American Urologic Association
Member Southeastern Section, American Urologic Association
Member Greenville County Medical Society
Member South Carolina Medical Association
Member American Reproductive Society
Member American Association Clinical Urologists
Member Society for Sexual Medicine of North America

2000 – 2001
Partnership Board University of South Carolina School of Medicine

1995 – 1996
Chairman Department of Urology – Greenville Hospital System
Lawrence King Hill, MD

Honorary Societies

PHI BETA KAPPA  College
ETA SIGMA PHI  National Honorary Classical Language Society
CHI BETA PHI  National Honorary Scientific Fraternity
ALPHA CHI SIGMA  Fraternity College Chemistry – Member Past President and delegate to National Conclave

National Honorary Society – High School

ETA SIGMA PHI- Award for Outstanding Achievement in Latin - South Carolina High School

Publications

1991  Prostate Cancer Report in Greenville Hospital System Oncology Program Annual Report


May 1987  American Urologic Association Oral and Poster Presentation; Sperm Penetration Bioassay as A Method of Evaluating Semen Obtained from Electro ejaculated Spinal Cord Injured Males Anaheim, CA

1986  Urologic Resident’s Day Competition; 2nd place Essay Contest  Washington, DC

Certification and Other Awards

1986  Certified American Board of Urology
1998  Recertified American Board of Urology
2008  Recertified American Board of Urology
1986  Recognized by Hampden-Sydney as one of the Most Outstanding Graduates in the past Decade

1990 – Present  Voted Best Doctors in United States
Lawrence King Hill, MD

Medical License

District Of Columbia # 14911 (INACTIVE)
South Carolina # 13242

Employment

1987 – 2011 Private Practice Urology - Greenville, South Carolina
2011 – Present Regional Urology; University Medical Group; University of South Carolina School of Medicine - Greenville, South Carolina

Additional Professional Societies

Member Society for Sexual Medicine of North America

Member American Association of Clinical Urologists

Laboratory Clinical Experience

Clinical Lab Director – Upstate Urology 1991 – 2012 - Developed and Implemented Protocols and Quality Assurance Program for Upstate Urology including Urinalyses and Semen Analyses
Date of Birth: August 17, 1970
Dayton, Ohio

Education:

1992 Bachelor of Arts-Chemistry University of Dayton
Chemistry
Dayton, Ohio

1997 Doctor of Medicine Wright State University
Dayton, Ohio

Medical Training:

1997-1999 Department of Surgery University of Illinois
Department of Surgery
Chicago, Illinois

1999-2003 Department of Urology University of Illinois
University of Illinois
Chicago, Illinois

Fellowship Training:

2003-2005 Endourology/Laparoscopy Duke University
Endourology/Laparoscopy
Durham, North Carolina

Academic Interests:

Robotic surgery, laparoscopy, endourology, and metabolic abnormalities in nephrolithiasis

Licensure:

State of North Carolina medical license # 200300411
State of South Carolina medical license # 33337

Hospital Affiliations:

Greenville Hospital Systems, Greenville, SC
**Professional Appointments:**

<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Position/Committee</th>
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<tbody>
<tr>
<td>1994</td>
<td>Wright State University School of Medicine Faculty Curriculum Subcommittee</td>
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<tr>
<td>1994-95</td>
<td>Ohio State Medical Association Judicial and Legislative Committee</td>
</tr>
<tr>
<td>1995-97</td>
<td>Ohio State Medical Association School Representative</td>
</tr>
<tr>
<td>1996</td>
<td>American Medical Association Student Delegate, National Convention</td>
</tr>
<tr>
<td>2000</td>
<td>University of Illinois ACGME Accreditation Committee</td>
</tr>
<tr>
<td>2007-10</td>
<td>Assistant Clinical Professor of Surgery - Louisiana State University School of Medicine</td>
</tr>
<tr>
<td>2008-10</td>
<td>Elected to Board of Managers - Regional Urology</td>
</tr>
<tr>
<td>2008</td>
<td>Operating Room Start Time Committee, Christus-Schumpert Hospital</td>
</tr>
<tr>
<td>2009-10</td>
<td>Hospital Joint Oversight Committee, Christus-Schumpert Hospital</td>
</tr>
<tr>
<td>2009-10</td>
<td>Hospital Credentialing Committee, Christus-Schumpert Hospital</td>
</tr>
<tr>
<td>2011-2015</td>
<td>Co-Chair Robotics Committee, Greenville Health System</td>
</tr>
<tr>
<td>2011-2015</td>
<td>Chief, Division of Urology, Department of Surgery</td>
</tr>
<tr>
<td>2011-2015</td>
<td>Assistant Professor, University of South Carolina School of Medicine</td>
</tr>
<tr>
<td>2011-2015</td>
<td>Medical Director for USToo prostate cancer support group</td>
</tr>
<tr>
<td>2011-2015</td>
<td>Instructor American Urologic Association Urologic ultrasound courses</td>
</tr>
<tr>
<td>2012-2015</td>
<td>Adjunct Professor, Department of Bioengineering, Clemson University</td>
</tr>
<tr>
<td>2013-2015</td>
<td>CAUTI (Catheter Associated Urinary Tract Infection) committee member Greenville Health System</td>
</tr>
<tr>
<td>2012-2015</td>
<td>Nominated to Greenville Health System Board of Trustees Committee on business development and marketing</td>
</tr>
<tr>
<td>2014</td>
<td>MedEx Academy mentor</td>
</tr>
<tr>
<td>2014-2015</td>
<td>Board member, Clinical Integration Network, My Health First Network</td>
</tr>
<tr>
<td>2015</td>
<td>General Surgery Program Evaluation Committee</td>
</tr>
<tr>
<td>2015</td>
<td>Board Member, South Carolina Urologic Association</td>
</tr>
</tbody>
</table>
**Awards:**

1983  Eagle Scout

1991  University of Dayton research stipend recipient- Property of 6-hydroxydopamine sulfyltransferase activity in rat liver

1992  University of Dayton research stipend recipient- Property of 6-hydroxydopamine sulfyltransferase activity in rat liver

1992  Colonel Edward C. Buescher, MD academic scholarship

2000  Irving J. Shapiro Award of the Chicago Urological Society- 2nd place

2001  Irving J. Shapiro Award of the Chicago Urological Society- 1st place

2002  John D. Silbar Award of the North Central Section of the American Urologic Association for clinical skills and bedside manner

2002  Bizarre and interesting cases of the North Central Section of the American Urologic Association- Grand prize

2005  Endourological Society international annual essay competition- second place

2014  American Urologic Association/Sociedade Brasileira de Urologia Academic Exchange Program

2015  Aspen Institute Health Innovators Scholar-inaugural class

**Primary Educational Responsibilities:**

2007-2010  Responsible for educating LSU residents in robotic surgery

2007-2010  Mentor to medical students interested in the field of urology

2011-2014  Biannual lectures to USToo prostate cancer support group

2011-2013  Curriculum and oversight for urology rotation-medical students (M3-M4)

2011-2014  Curriculum and oversight for surgical intern urology rotation

2011-2014  Curriculum and oversight for off service resident (primary care) urology rotation

2011-2015  Biannual lectures to family practice residents regarding urology in primary care

2012  Furman University-OLLI program on prostate cancer
2012-2014 Urethral catheterization course-USCSOM
2012-2015 Mentor to medical students interested in the field of urology
2012-2015 University of South Carolina School of Medicine second year curriculum instructor for Renal/Urology section
2013-2015 University of South Carolina School of Medicine second year curriculum instructor for “How to deliver bad news”
2013-2015 Curriculum and oversight of physician extender (PA/NP) rotations

Professional Society Memberships:

American Urologic Association
American College of Surgeons
Endourology Society
American Institute of Ultrasound in Medicine

Personal Interests:

Late 19th-early 20th century history, archery, hockey, primitive camping and a wide range of musical interests

Invited Lectures:

2004 University of Kentucky- Grand rounds- Medical management of nephrolithiasis
2005 Australian Prostate Cancer Symposium-Royal Melbourne Hospital- Fellowship experience of robotic prostatectomy
2006 Louisiana State University – Grand rounds- Practical approach to renal colic in the Emergency Department
2006 American Cancer Society- Man-to-man prostate cancer support group
2007 Ohio State University- 2nd Annual World Robotic Symposium expert panel on robotic prostatectomy
2008 Southeastern Section of the American Urologic Association moderator for robotic and laparoscopic podium session
2008 International College of Surgeons-Current state of robotics in urologic surgery
2014 World Congress of Endourology-Robotic Assistant: Help me don’t hurt me
2015 New York Section of the American Urologic Association- Lowering catheter associated urinary tract infections using a simple post-operative protocol
2015  JD Ashmore Lecture- Lowering catheter associated urinary tract infections using a simple post-operative protocol

2015  American Urologic Association-New York Section. Lowering the CAUTI.

Publications:


12. Charles G. Marguet, W. Patrick Springhart, Yeh Hong Tan, Anup Patel, Shabnam Undre, David M Albala, Glenn M Preminger.: Simultaneous, combined use of flexible ureteroscopy and percutaneous nephrolithotomy reduce the number of access tracts in the management of complex renal calculi. BJU Int. 96(7):1097-100, 2005


Abstracts:


8. Steven A. Terranova, Yeh Hong Tan, W. Patrick Springhart, and David M. Albala. Hand-Assisted Laparoscopic Renal Surgery: Hand Port Incision Complications. J. Endourology 17(1):133 #17.21


23. James O. L’Esperance, W. Patrick Springhart, Wesley Ekeruo, Michaella E. Maloney, Yeh Hong, Tan, Matthew D. Young, Charles G. Marguet, Ganesh V.


47. W. P. Springhart. Use of autologous peritoneal sling following robotic assisted laparoscopic prostatectomy improves post-operative incontinence. Southeastern section of the American Urologic Association. March 2009

**Book Chapters:**


**Videos:**


**Podium Presentations**

1999 Grand Rounds University of Illinois- Interstitial Cystitis

2000 Chicago Urological Society- Arteriovenous malformation of the prostate

2001 Charles Huggins resident essay competition of the Chicago Urological Society


2001 Chicago Urological Society- Fetus in fetu

2004 Society of Urologic Nurses Association- Practical application of metabolic abnormalities associated with nephrolithiasis.

**Clinical Research:**

July 2000- June 2001
Effect of neonatal estrogenization on SRC-1 and ARA-70 in the rodent prostate

July 2000-June 2001 Bayer Corporation Sub Investigator
High dose Ciprofloxacin for complicated UTI

July 2000-June 2001 ZENECA Sub Investigator
Casodex vs. placebo in patients with early prostate cancer

July 2000-June 2001 Veterans Affairs Sub Investigator
Prostate cancer intervention versus observation trial (PIVOT)

July 2000-June 2001 ALZA Corporation Sub Investigator
Safety and efficacy study of DUROStm (Viadur®) leuprolide implantable therapeutic system in patients with prostate cancer

July 2000-June 2001 TAP Pharmaceuticals Sub Investigator

July 2000-June 2001 TAP Pharmaceuticals Sub Investigator
Phase II randomized-discontinuation study of oral CEP-701 in prostate cancer patients who have failed first-line hormone therapy
July 2003-July 2004  Boston Scientific Corp.  Sub Investigator
Clinical outcome in prospective randomized trial of the Comfort® stent

Prospective randomized double blinded study of Ditropan XL or phenazopyridine or placebo after ureteral stent placement

August 2004  GlaxoSmithKline Corp.  Sub Investigator
Combination of Avodart® and Tamsulosin study-COMBAT

January 2009-present  Vivus, Inc.  Principal Investigator
An open label, long-term evaluation of the safety and efficacy of avanafil in men with erectile dysfunction

January 2013-present  BN Immunotherapeutics  Principal Investigator
A Randomized, Double-Blind, Phase 3 Efficacy Trial of an Investigational Vaccine (PROSTVAC-VF) ± GM-CSF in Men with Early Metastatic, Castrate-Resistant Prostate Cancer
William F. Flanagan, MD
Greenville Health System, Department of Surgery, Regional Urology
15 Park Creek Drive, Greenville, SC 29605
Office (864) 797-7450
wflanagan@ghs.org

EDUCATION
1977 - 1981 B. S.: Davidson College, Davidson, NC
1981 - 1985 M.D.: Duke University School of Medicine, Durham NC

PROFESSIONAL TRAINING
1985 - 1987 General Surgery: Department of Surgery, Baylor College of Medicine, Houston, TX
1987 - 1991 Urology Residency: Scott Department of Urology, Baylor College of Medicine, Houston, TX

LICENSURE
1985 FLEX Examination, Denver, CO
1985 Texas Resident in Training License
1991 - Present South Carolina State Medical License

BOARD CERTIFICATION
1993 Board Certified, American Board of Urology

PROFESSIONAL AFFILIATIONS
1993- Present American Urologic Association
1995- Present Fellow, American College of Surgeons
1993 - 2013 Clinical Instructor, School of Medicine, University of South Carolina
1993 - 2013 Clinical Instructor in Surgery, Medical University of South Carolina
2015 - Present Clinical Assistant Professor, University of South Carolina School of Medicine Greenville

SOCIETY MEMBERSHIPS
Southeastern Section of AUA
Sexual Medicine Society of North America
American Society for Men’s Health
American Institute of Ultrasound in Medicine
South Carolina Medical Association
Greenville County Medical Society
HONORS

1981 Phi Beta Kappa, Davidson College, Davidson, NC
1981 Magna Cum Laude graduate in chemistry, Davidson College, Davidson, NC
1988 Research Grant, Southern Medical Association: “PSA: Cloning the cDA and Steroid Dependent Regulation in LNCaP Cells
1989 Participant, Resident Essay Contest, Basic Science Division, South Central Section of the American Urological Association
1989 Research Grant, Southern Medical Association: “Analysis of Growth Factors in BPH and Prostate Cancer Utilizing Polymerase Chain Reaction Methods”
2014 Chosen as Coloplast Center of Excellence for Penile Implant Surgery

PUBLICATIONS


<table>
<thead>
<tr>
<th>Year</th>
<th>Authors</th>
<th>Title</th>
<th>Details</th>
</tr>
</thead>
</table>
J. Erik Busby, M.D.

Greenville Health System Department of Surgery
Regional Urology
15 Park Creek Drive
Greenville, SC 29605
864-546-0318 (cell)
864-797-7459 (office)
ebusby@ghs.org (work)
busbyje@yahoo.com (personal)

EDUCATION

M.D.  Medical University of South Carolina, 1998
      Charleston, South Carolina

B.E.  Vanderbilt University, 1992
      Nashville, Tennessee
      Majors:  Biomedical Engineering
              Electrical Engineering

EMPLOYMENT

2012-Present: Greenville Health System Division of Urology / Department of Surgery
      Director, Urologic Oncology
      Clinical Associate Professor, University of South Carolina School
      of Medicine at Greenville

2011-2012:  University of Alabama, Birmingham
      Associate Professor (with tenure), Department of Surgery, Division of
      Urology
      Associate Scientist, UAB Comprehensive Cancer Center
      Associate Residency Program Director
      Appointment, UAB School of Graduate Studies
      Co-Director, Urologic Laboratories

2007-2011:  University of Alabama, Birmingham
      Assistant Professor, Department of Surgery, Division of Urology
      Associate Scientist, UAB Comprehensive Cancer Center
      Associate Residency Program Director
      Appointment, UAB School of Graduate Studies
      Co-Director, Urologic Laboratories
POSTGRADUATE TRAINING

2004-2007: University of Texas, M.D. Anderson Cancer Center, Department of Urology, Urologic Oncology Fellow

2000-2004: University of California, Davis, Department of Urology, Resident Physician

1998-2000: Department of Surgery, University of California, Davis, General Surgery Internship and Resident training

1995: Medical University of South Carolina, Department of Microbiology, Research Assistant

1992-1994: Medical University of South Carolina, Department of Obstetrics/Gynecology, Research Assistant

RESEARCH

2007-2012: University of Alabama at Birmingham
- Investigating impact of estrogen on renal ischemia
- Impact of α-Methylacyl-Coenzyme A Racemase on Branched-Chain Fatty Acid Metabolism in Human Prostate Cancer AMACR
- Investigation of Prostasomes and their potential source for prostate cancer markers and drug targets
- Evaluation of Gamma-delta T-cell impact on urologic malignancies

2004-2007: M.D. Anderson Cancer Center, Houston, Texas
- Investigating the role of VEGF, EGF, and PDGF receptors in prostate cancer metastasis and effects of blockade on antivascular therapy in orthotopic nude mouse models
- Investigation of multidrug resistant prostate cancer cell response to tyrosine kinase inhibitors in in vivo orthotopic nude mouse tumor models
- Establishment of endothelial cell-specific LNCaP metastatic clones and investigation of mechanisms and biologic characteristics facilitating metastasis to lymph nodes and bones
- Characterization of effects of drugs (AEE788 [anti-EGFR, VEGFR], STI571[anti-PDGFR], AMN107[anti-PDGFR]) on tyrosine kinase pathways in prostate cancer cells and tumor-associated endothelial cells
- Evaluation of the role of IL-6 and macrophages and their association with PDGF and TGF-beta in prostate cancer growth and bone metastasis

2001-2004: Department of Urology, University of California, Davis
- Determining the role of Src and MapK in activation of androgen receptor during prostate cancer progression.
- Chimeric stimulation of androgen dependent prostate cancer cells by surrounding androgen independent cells.
- Investigating the role of IL-8 in androgen independent prostate cancer
- Investigating selective angiogenesis inhibitors in vitro and in vivo
- The role of neuroendocrine differentiation in prostate cancer progression

1995: Department of Microbiology, Medical University of South Carolina
- Mapping the Syrian Hamster Genome

1992-1994: Department of Obstetrics/Gynecology, Medical University of South Carolina
- Infertility and immune mechanisms in endometriosis
- Antisperm antibodies and their role in infertility.

FUNDING/TRIALS

GHS

- Busby JE, Site co-I--PROSPECT study (BNIT-PRV-301): Multicenter, Randomized, Double-Blind, Placebo-Controlled, Phase III in men with Metastatic Castrate-Resistant Prostate Cancer (Closed)

- Busby JE, Site PI--Exosome: Clinical Validation of a Urinary Exosome Gene Signature in Men Presenting for Suspicion of Prostate Cancer, 2014. (Closed)

- Busby JE, Site PI--Aragon - Multicenter, Randomized, Double-Blind, Placebo-Controlled, Phase III Study of ARN-509 in Men with Non-Metastatic (MO) Castration-Resistant Prostate Cancer (Active)

- Busby JE, Site PI--Genomic Health - Genomic markers in transitional cell cancer of the bladder, renal pelvis and ureter: sample acquisition for methods development and discovery (Active)

Active upon departure of prior position at UAB

- Busby, Site PI--CALGB90203, A Randomized Phase III Study of Neo-Adjuvant Docetaxel and Androgen Deprivation Prior to Radical Prostatectomy Versus Immediate Radical prostatectomy in Patients with High-Risk, Clinically Localized Prostate Cancer

- Busby, Site PI--ECOG3805, CHAARTED: ChemoHormonal Therapy versus Androgen Ablation Randomized Trial for Extensive Disease in Prostate Cancer

- Grizzle W., Gaston S., Busby JE (Co-Investigator, 2% funding)—Department of Defense Biomarkers in the Detection of Prostate Cancer in African Americans. 9/01/10 – 8/31/13
• Grizzle W., Busby JE (Co-Investigator) (NIH) Minimal Prostate Cancer in African Americans: Molecular/Clinical Characteristics

• Busby JE, Site PI--SWOG 9450-CSP#407-Prostate Cancer Intervention Versus Observation Trial-A Randomized Trial Comparing Radical Prostatectomy versus Palliative Expectant Management for the Treatment of Clinically Localized Prostate Cancer

• Busby JE, Site PI--UAB 0441-Detection of Bladder Cancer by Microsatellite Analysis (MSA) of Urinary Sediment: Multi-Institutional Study

• Busby JE, Site PI--UAB 0516-Phase II Study of Isoflavone G-2535 (Genistein) In Patients With Bladder Cancer

• Busby JE, Site PI--UAB 0940 F090921002-EDRN PCa3 Validation Trial and Urinary Reference Set

• Busby JE, Site PI--X030820007-Protocol for Obtaining Solid Tissue, Fluids, and Information for Research for Genitourinary Research

• Busby JE, Site PI--X070622010-Retrospective Renal Database

• Busby JE, PI--X070920008- Prostasomes as a Key Regulator of Prostate Cancer Growth Regulation

• Busby JE, PI--X081217002-Complications of Prostate Biopsy and Associations with Prostate Adenocarcinoma in Transplant Recipients

• Busby JE, PI--X090814005 Prostasome Proteins: Potential Markers for Detection of Prostate Adenocarcinoma

• Goode P, Busby JE (Co-investigator), Markland A, Jacob R, Wilson TR--Protective Life Clinical Initiative RFP20101, Grant Prevention and Rehabilitation of Bladder and Bowel Symptoms Associated with Treatment of Prostate Cancer.

**Closed**

• Busby JE (Co-PI), Mobley J, Hudson-Alpha Institute for Biotechnology--Genomic analysis of renal cell carcinoma samples and normal kidney samples

• Busby JE (Co-PI), Mobley J, Hudson-Alpha Institute for Biotechnology--Global Genomic Analysis of Prostate, Breast and Pancreatic Cancer
• Busby JE (Site PI)--UWI09-14-01 Phase IIa, Randomized, Placebo-Controlled Trial of Single Dose Cholecalciferol and Daily Genistein (G-2535) versus Placebo in Men with Early Stage Prostate Cancer Undergoing Prostatectomy

• Busby JE (PI)--TNG-CL007, A Multicenter Study to Obtain Bladder Tissue Specimens from Subjects Transurethral Resection of Bladder Tumor (TURBT) or Other Transurethral Biopsy Specimens

• Busby JE (PI)--UWI05-7-01-Phase Ib Placebo-Controlled Trial of Diindolylmethane (DIM) in the Study of the Modulation of Intermediate Endpoint Markers, in Patients with Prostate Cancer who are Undergoing Prostatectomy

• Busby JE (PI)--IACUC 081008490-Hormonal Protection from Renal Ischemia and Reperfusion Injury in Rats

HONORS/AWARDS

• Commendation – Society of Urologic Oncology Fellowship Committee, 2015
• UAB Division of Urology, Outstanding Faculty Teaching Award, 2010
• UAB Division of Urology, Outstanding Faculty Teaching Award, 2009
• M.D. Anderson Cancer Center Trainee Excellence Award, 2006
• American Urological Association Foundation Graduate Scholar, 2006
• American Association of Cancer Research, Scholar-in-Training Award, 2006
• American Foundation of Urologic Diseases / American Urological Association Foundation Scholar, 2005-2006
• Pfizer Scholars in Urology, 2004
• Northern California Residents Competition, Basic Science — First Place, 2003, Second Place, 2004
• Earl Nations Resident Scholarship, 2002
• Honors, medical school rotations: Surgery, Obstetrics/Gynecology, Psychiatry, Family Medicine, 1996-1997
• Medical Student Summer Research Fellowship, 1995
• Honorable Mention, Student Research Day, 1995

APPOINTMENTS:

Current:
• Clinical Associate Professor, University of South Carolina School of Medicine Greenville

Prior
• Associate Professor (with tenure), UAB Department of Surgery, Division of Urology
• Associate Scientist, UAB Comprehensive Cancer Center
• Joint appointment Graduate School
• Joint appointment Department of Pathology

PUBLICATIONS


BOOK CHAPTERS


PRESENTATIONS/ABSTRACTS


7. Bladder and Bowel Symptoms One to Five Years after Intensity-Modulated Radiation Therapy for Prostate, Patrick McCabe, Rojymon Jacob, David Redden, Janet Colli, Erik Busby, Tracey Wilson, Alayne Markland, Kathryn Burgio, Patricia Goode. Presented at Medical Student Research Day, University of Alabama at Birmingham


27. Treatment of human prostate cancer cells growing in the bone of nude mice with


**INVITED LECTURES / MODERATOR:**


4. Update on Treatment of Prostate Cancer Therapies – University of Alabama School of Medicine Medical Alumni Weekend, Birmingham, AL, 2009

5. Robotic cystectomy: Decreased morbidity and improved patient outcomes, Gulf Shores Annual Meeting, Destin, FL, 2009

7. Moderator, Prostate Cancer Podium Session, Southeastern Section American Urological Association, Miami, FL, 2010

8. Update on Multimodal Therapy for Prostate Cancer, Alabama Cancer Congress, Homewood, AL, 2010

9. Surgical Management of Regionally Advanced and Metastatic Renal Cell Carcinoma, UAB Department of Surgery Grand Rounds, 2010


11. Moderator, Bladder and Prostate Cancer Session, Southeastern Section American Urological Association, Amelia Island, FL 2012

12. Challenges of prostate cancer treatment in the elderly male, Grand Rounds, Department of Geriatrics, UAB, May, 2011


14. Current Issues in Prostate Cancer for the Primary Care Physician, Medical Grand Rounds, GHS, November 2014

15. Prostate Cancer in 2014, OLLI lecture, Furman University, November 2014


COMMITTEES

Prior to Departure from UAB:
- Disease Oriented Working Group (DOWG) - Genitourinary – Chairperson
- Professional Liability Trust Fund - UAB
- Cancer Center Consortium
- NCCN – Prostate Cancer Treatment Guidelines committee member
- NCCN – Prostate Cancer Early Detection Guidelines committee member
- Associate Residency Program Director
- Cancer Services - Clinical Leadership Committee
- Cancer Registry Advisory Committee
- Health System Perioperative Management Committee
- Robotic surgery committee
- Director of Urology Search Committee member
- Integrated Multidisciplinary Clinical Care Program
- Faculty Senate

Greenville Health System
- Chair, OR operations committee – GHS
- Co-director, GU MDC – GHS
- Urologic OR Products Committee – GHS
- UMG Clinical Practice and Value Based Health Care Committee - GHS

MENTOR EXPERIENCE

- Mentor, Clemson Bioengineering student Urology rotation, 2014 to present

- Jason W. Ashley - Graduate Student Committee, University of Alabama at Birmingham
  - Ph.D. Thesis: Involvement of CD68 in prostate cancer bone metastasis

- Zachary Reardon – Mentored Medical student scholarly activity rotation 6/2010 to 8/2010
  - Projects:
    - Vascular anomalies in renal transplant patient and their impact on recipient outcomes. Accepted as abstract for national meeting and submitted for publication
    - Impact of cold ischemia on renal tumor size and clinical staging in partial nephrectomy patients. Manuscript submitted for publication

- Seena Safavy - Mentored Medical student scholarly activity rotation 5/2010 to 7/2010
  - Projects:
    - Impact of anastomotic leaks on urinary symptoms after robotic prostatectomy. Accepted as abstract for regional and national meeting. Submitted manuscript for publication.

- Michael Knox, M.D. – Mentored resident during research rotation, 1/2010 to 7/2010
  - Projects:
    - Outcomes of early experience in robotic radical cystectomy. Accepted as abstract for regional and national meeting. Submitted manuscript for publication.
    - Identification of which patients truly benefit from radical cystectomy. Accepted as abstract for regional and national meeting. Submitted manuscript for publication.

- Sergey Ananyev, M.D. – Mentored resident during research rotation, 6/2009 to 12/2009
Projects:
- Complications and outcomes of renal transplant patients undergoing biopsy and treatment for prostate cancer. Presented at national meeting in abstract form. Submitted as manuscript.
- Isolation and utility of prostasomes from seminal fluid in patients with prostate cancer. Co-mentored basic science study with Dr. James Mobley, Ph.D.

Benjamin Martin, M.D. – Mentored resident during research rotation, 1/2009 to 7/2009
  - Projects:
    - Preclinical study of impact of estrogen on renal function during warm ischemia.

PROFESSIONAL ACTIVITIES
- Lecturer, USC-Greenville Medical Student Second Year Course – Prostate and Testicular Anatomy/Pathology, 2013-present
- Reviewer: Journal of Clinical Oncology, JAMA, Cancer Research, Cancer, Journal of Urology, Urologic Oncology, Urology, 2007-present
- Consulting Editor, International Brazilian Journal of Urology, 2012-present
- Lecturer, UAB Medical Student Second Year Course – Male Reproductive Systems, 2007-2012
- Assistant Instructor, Pathology course, University of California, Davis School of Medicine, 2002-2004
Matthew D. Young, MD, MBA

mdyoungmd@gmail.com

Home Address:
107 Aldridge Drive
Greenville, SC  29607
864-238-5993

DATE OF BIRTH: 09/02/1971

EMPLOYMENT:

Greenville Health System
Greenville, SC  07/2013-present

Carolina East Health System
New Bern, NC  07/2012-07/2013

The Urology Clinic
Athens, GA  07/2006-05/2012

POST DOCTORAL TRAINING:

Resident, Urologic Surgery  07/2002-7/2006
Duke University Medical Center
Durham, NC

Duke University Medical Center
Durham, NC

EDUCATION:

The University of Tennessee  M.B.A.  12/2011
Knoxville, TN

The University of North Carolina School of Medicine  M.D.  5/2000
Chapel Hill, NC

The University of South Carolina  post graduate pre-medical courses
Columbia, SC  (non-degree program)
The University of North Carolina at Chapel Hill
B.A., Political Science
Chapel Hill, NC

BOARD CERTIFICATION:
American Board of Urology
2008-present

LICENSURE:
State of Georgia, Medicine and Surgery in Georgia
06/2006-present
State of Nevada, Medical Doctor
02/2012-present
State of Pennsylvania, Medical Physician and Surgeon
04/2012-present
State of North Carolina, Physician License
05/2012-present
State of South Carolina, Medical Physician
06/2013-present

HOSPITAL AFFILIATIONS:
Greenville Health System, Greenville, SC

MEMBERSHIPS IN PROFESSIONAL SOCIETIES:
American Urological Association
American Association of Clinical Urologists

PERSONAL INTERESTS:
Travel, hiking, skiing, college basketball

PUBLICATIONS:


## Continuing Medical Education Application

**Date:** 11/9/2015  
**Proposed Title of Activity:** Vascular Lab Conference  
**Proposed Date of Activity:** The third Wednesday of each month  
**Time:** 7:00AM – 8:00AM  
**Location of Activity:** CC2  
**Medical Dir. responsible for activity:** Tod M. Hanover, MD  
**Phone Number:** (864) 455-7886  
**Fax:** (864) 455-1320  
**Email:** THanover@ghs.org  
**Administrative Contact:** Alicia Keely  
**Phone Number:** (864) 455-7886  
**Fax:** (864) 455-1320  
**Email:** AKeely@ghs.org  
**Affiliation:** Greenville Health System, Department of Surgery  
**Address:** 701 Grove Road, 3rd Floor Support Tower  
**City:** Greenville  
**State:** South Carolina  
**Zip:** 29605  
**Commercial/Financial Support [if applicable]:** Yes □ No X  
(Any source of funds not provided from GHS operational accounts)  
If yes, please provide source name:  

**Credits requested:** 1.0  
(add minutes of education activities and divide by 60. Do not include breaks, introduction times, etc.)  
**Occurrence:** Third Wednesday each month  
# per year: 12 (one per month)  
(i.e. weekly, monthly, etc.)

This application is designed to assist planners in working through the steps that are required by the Accreditation Council for Continuing Medical Education (ACCME), the South Carolina Medical Association (SCMA) and Greenville Health System (GHS) prior to approval of CME activities sponsored by Greenville Health System.

All of the steps must be taken independently of commercial interests. Further, all persons who are in a position to control CME content must disclose all relevant financial relationships with regards to commercial interest to the CME Department. The GHS-CME Department must implement mechanisms to identify and resolve all conflicts of interest before any CME activity occurs.

Revised August 1, 2014
Step 1: Identifying the educational gap(s)

The planning process begins by identifying at least one educational gap. This educational gap can be expressed as the difference between what actually occurs and what should occur to give the best possible care to our patients.

The person filling out this application must (a) describe the identified gap(s); (b) determine whether closing the identified gap(s) will improve knowledge, enhance competency, and/or change physicians behavior; (c) identify barriers that may need to be overcome to close the gap(s); and (d) describe how the gap was analyzed so the cause of the problem is being addressed through CME.

The latter is termed “needs assessment” and must include at least two different sources. For example, scientific evidence for the literature; opinion from clinical or scientific experts; information from the general public, the media and/or other environmental sources; observed data from local or national databases; and/or survey from past participants or prospective learners. Whenever possible, it is important to utilize our Quality Initiatives and other forms of organizational data to address your department needs assessment.

A. What is/are the educational gap(s)? How was this gap (were these gaps) identified? What is/are the quality gap(s) that this CME activity is Designed to address?

For the practicing vascular surgeon, there is a gap in the clinical and scientific knowledge related to vascular ultrasound.

B. What is the reason that the gap exists? Is it because physicians do not know something (i.e., there is a knowledge deficit)? Is it because physicians are not able to do something (i.e., there is a competency deficit)? Is it because the physician did something, or failed to do something (i.e., there is sub-optimal physician behavior)?

The gap exists because the interpretation is not easily obtained. There are limited conferences available in the specific field of vascular ultrasound.
Step 2: Identifying the Target Audience

CME consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients or the profession. **CME activities are intended to increase competency, influence physician behavior, and/or improve patient outcomes.** The major reason for planning your CME activity should be to close the gap(s) you identified in Step 1.

The next step is to identify the target audience for your proposed activity. By clearly identifying the specific target audience for the proposed CME activity, you will be able to plan a learning process that will enable the learners to close the identified gap(s).

You should specify both the general type of health professional that you want to target (i.e., physicians, nurses, pharmacists, etc.) as well as the specific type of learner within those broad categories (e.g., primary care physicians, infectious disease specialists, neurologists, transplant surgeons, etc.).

**Please note:** Only physicians may be awarded **AMA PRA Category 1 Credit™** by accredited providers. All other non-physician health professionals will receive attendance. For CME, physicians must always be the primary target audience for a continuing medical education activity.

What is/are the primary target audience(s) that will help close the identified educational gap(s)?

1. Vascular Surgeons
2. Vascular Medicine Physicians
3. Radiologists
4. Cardiologists

Step 3: Specifying the Pertinent ABMS/ACGME Competency

Revised August 1, 2014
The American Board of Medical Specialties (ABMS), Institute of Medicine (IOM) Core Competencies, and Accreditation Council for Graduate Medical Education (ACGME) have determined that there are six critical competencies that physicians must master in order to provide optimal clinical care. The 3rd step in the CME planning process is to specify which of the following competencies is most relevant to a gap(s) that has/have been identified: (1) patient care; (2) medical knowledge; (3) practice-based learning and improvement; (4) interpersonal and communication skills; (5) professionalism; and (6) systems-based practice. If you would like more information about the six ABMS competencies, please see the following web site: http://www.abms.org/Maintenance_of_Certification/MOC_competencies.aspx

### Step 4: Identifying Potential Partners and Allies

Closing the identified gap may be a daunting task. It is worth your time to consider whether other groups or organizations are working on the same issue. If so, joining forces with them may help you accomplish your common goal of closing the identified gap(s). Working with other groups may increase access to scarce resources, improve efficiency, and produce synergistic partnerships. Importantly, these potential partners may be internal or external to your organization or unit. Step 4 of the planning process involves identifying who these potential partners are.

### Step 5: Identifying Non-Educational Strategies

Revised August 1, 2014
Numerous research studies have shown that CME interventions can increase competency, influence physician behavior, and/or improve patient outcomes. These findings were confirmed in a 2007 report by the Agency for Healthcare Research and Quality [Evidence Report / Technology Assessment; Number 149: AHRQ, 2007]. Nevertheless, education of health professionals is only one strategy that should be used to improve patient safety and healthcare quality. Importantly, there are many non-educational strategies that may play a crucial role in improving quality. This is especially true when one considers the gaps that can best be addressed with “system-level” interventions. As such, step 5 involves the identification of non-educational strategies that may help close the identified gap(s).

**Step 5: Are there non-educational strategies (e.g., patient reminders, order sets, computer training check sheets, guidelines, pocket cards, etc.) that are currently being used to close the identified gap(s)? If not, what kind of non-educational strategies could be created/used?**

The gap is an ongoing educational gap in the evaluation and interpretation of non-invasive vascular labs. This gap will be best served with educational feedback from the reading physicians.

**Step 6: Determining the Appropriate Evaluation Methodology**

In order to determine whether the identified gap(s) has/have been closed, the CME activity must be evaluated. Similarly, the evaluation methodology must match the type of gap that was initially identified in step 1. For example, an activity designed to change the behavior of a physician should not be limited to a post-activity survey that only asks whether participants were satisfied with the quality of the handout materials.

To that end, a useful paradigm that is used in educational circles to measure educational impact involves various levels of evaluation. The ten levels are as follows: (1) learner participation; (2) learner satisfaction; (3) learner knowledge; (4) learner learning, measured before and after an educational intervention; (5) learner competence or ability, measured by a variety of techniques that determine whether a physician can apply the knowledge they have in the care of patients (i.e., this knowledge in practice can be determined by questions that measure application, case-based assessments, and/or simulations); (6) self-reported learner behavioral change, typically determined by participants filling out an “intent-to-change” form immediately following an educational activity, followed by a questionnaire or interview a few months later; (7) documented learner change in behavior, determined by a third party that measured actual behavior both before and after an educational intervention; (8) impact on individual patients, as measured by health outcomes on specific patients; (9) impact on patient populations, as measured by health outcomes on a patient or population cohort; and (10) the cost of the educational intervention, better known as the return on education (ROE).

Revised August 1, 2014
Form 3

The first part of step 6 of the planning process requires that you specify which level of educational evaluation would best determine whether the CME activity has closed the identified gap(s) you identified in step 1 in this document. The second part of step 6 involves the selection of one or more tools that will be used to determine whether or not the gap(s) has/have been closed after the intervention is complete.

1. Which of the ten levels of educational evaluation described above will best determine whether your educational activity has closed the identified gap(s)? GHS requires that CME activities measure Level 1 (participation) as well as Level 5 (competence), Level 6 (self-reported learner behavior change), Level 7 documented learner change in behavior, Level 8 (impact on individual patients), or Level 9 (impact on populations). You can check all that apply.

   X (Level 1) Participation
   X (Level 5) Learner competence or ability
   X (Level 6) Self-reported learner behavioral change
   X (Level 7) Documented learner change in behavior
   X (Level 8) Impact on individual patients
   X (Level 9) Impact on patient populations

2. What type of evaluation method/tool(s) will you use to determine whether the identified gap(s) has/have been closed? The tool must be able to measure Level 1 as well as Level 5, Level 6, Level 7, Level 8, or Level 9. Do you plan on using this/these tool(s) on every participant or a sample of the learners?

   All participants will sign in and confirm attendance. Questionnaire will be given to every participant to evaluate #s 5, 6, 7, and 8.

Step 7: Determining the Desired Results, Learning Objectives and Content of the CME Activity

In steps 2 and 3, the target audience and pertinent ABMS/ACGME competency were identified. Subsequent steps involved the identification of non-educational interventions and potential allies that could help close the identified gap(s). Step 6 involved the identification of an appropriate evaluation methodology that will be used to judge whether the activity has successfully closed the identified gap(s). In step 7, the desired results, learning objectives and content of the CME activity are determined.

Revised August 1, 2014
Importantly, this step has been deliberately placed at this stage in the planning process. In other words, **the identified gap(s) and the issues identified in previous steps should always be considered BEFORE the learning objectives and educational content are decided.**

Learning objectives can be thought of as “stepping stones” that help learners understand the nature of the identified gap(s). Well thought out learning objectives also serve as a guide to instructors so that they create content that will help learners close the identified gap(s). As such, objectives should contain action verbs and criteria that help activity planners evaluate whether the gap(s) was/were closed (e.g., whether the activity helped improve competency, influence physician behavior, and/or improve patient outcomes). **Moreover, planners should present the learning objectives to instructors and authors, not vice versa.**

Similarly, the content should reflect the premises outlined in the learning objectives. In turn, the content should be dictated by the need to close the identified gap(s). In other words, CME planners for your department should direct instructors to address the need(s) identified in step 1 (i.e., the cause that is responsible for the gap in optimal care). Faculty may be actively involved in the process of content creation; however, they should never lose sight of what the planners are trying to achieve (i.e., helping the learners close the identified gap by addressing the need to improve knowledge, enhance competence, influence behavior, and/or improve patient outcomes).

In addition, the creation of CME content must strictly adhere to all pertinent ACCME Essential Areas and the Standards for Commercial Support. **To that end, GHS only sponsors CME activities that promote improvements or quality in healthcare and not the proprietary interests of any commercial organization.** All relevant financial relationships with commercial interests must be disclosed to the GHS - CME department so that methods to resolve any conflicts of interest may be implemented prior to the CME activity taking place. Further, the management of any commercial support must strictly adhere to the Standards for Commercial Support. In all cases, education is separated from promotion. Disclosure to the learners of relevant financial relationships and any commercial support of the activity must also occur.

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<th>Step #7</th>
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A. Based on the identified gap(s) as well as the cause for the gap that you discovered through the needs assessment analysis, what are the desired results of the CME activity? Based on this answer, what is the content you want to cover?

The content will consist of the core diagnostic studies including upper and lower extremity arterial studies, upper and lower extremity veins studies, and carotid artery studies.
Step 8: Selecting the Appropriate Educational Methodology

Importantly, the educational methodology should reflect the gap(s) identified in step 1, the evaluation methodology chosen in step 6, as well as the desired results, learning objectives, and the content chosen in step 7. Whenever possible, adult learning principles (as well as the physician learning and change process) should be taken into account when selecting appropriate educational methodology.

**A.** Based on the previous steps, what is/are the right educational format(s) to use for the activity? What type of activity will it be (i.e., live activity, enduring material, internet, performance improvement, internet point of care, etc.)? Why?

Face to face interactive format where a study can be displayed and the participating physicians can get immediate feedback.

**B.** What will be the educational design of the activity (e.g., presentation, case-based, round table, simulation, etc.)? Consider adult learning principles and the identified gap(s).

Presentation and Case-Based

**C.** Is the educational format appropriate to the setting, your objectives, and your desired result(s)?
D. How do the educational format/methodology and design components of the CME activity support the desired results and learning objectives outlined in step ??

The objectives are very specific, related to each type of study, therefore using a case-based approach is appropriate.

Step 9: Selecting Speakers

Speakers should be selected only after the content has been chosen and the educational methodology has been determined. You should select speakers that are best prepared to teach the activity that you have planned, not vice versa. Criteria to consider when instructors are selected might include the following: demonstrated expertise in the content area selected; ability to communicate effectively with the target audience; and willingness to meet the educational needs that the planning committee has identified. In the end, speaker should understand what the purpose of the CME activity is (i.e., to improve competence, influence behavior, and/or to improve patient outcomes). Please note: All speakers are required to complete CME documentation. All external speakers must complete an entire CME package. Please contact the CME Coordinator to make arrangements to collect all the necessary paperwork for your speakers. The CME department will not award CME credit for any activities that fails to complete all the appropriate CME forms prior to the event.

Who are the right faculty to cover this content? Do you want them to focus on transfer of information (i.e., lectures and monographs), techniques to overcome gaps in competence (e.g., algorithms and case-based discussions), or strategies to overcome system problems (e.g., guidelines, policies, and toolkits)?

The faculty will consist of vascular surgeons, vascular medicine physicians, vascular surgical fellows, radiologists, and cardiologists.
Step 10: Describe your CME activity

The final step is to simply describe, in your own words, what you envision for your CME activity.

A monthly one hour meeting with a presenter who has expertise and interest in a specific topic. The presenter will give background educational information and then case presentation with audience participation with immediate feedback to the audience.

Thank you for your diligence in planning a CME activity of excellence. Your work is greatly appreciated by Greenville Health System and the Continuing Medical Education Department.

The following items must be attached to this application in order to be submitted for approval:

- Complete and attach: Copies of all Planning Committee Member CV - attached
- Copies of all speaker CV/Bios - attached
- Copies of Planning Committee Member disclosure forms
- Copies of two sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc). – attached; Needs analysis: Required Quality Improvement (discussed on page 60 of attached document), Technologist Training and Education (discussed on pages 8 and 11 of attached document)
- A copy of the rough draft of the agenda (including introduction time, breaks, etc.) - attached
- A copy of the tentative budget typed up. – n/a

In addition, one person must be identified as a person of contact for the CME Department to make initial contact. Also, this identified person will be responsible for ensuring all required paperwork has been turned in to the CME Department. Please list the name and phone number of this individual: Alicia B. Keely, Fellowship Coordinator; (864) 455-7886.
Form 3
Please Sign Here: Tod M. Hanover, MD

List the Planning Committee members and their respective institutional affiliation:

Each member of the Planning Committee, including the Facilitator must complete an annual CME Disclosure Form. Please send (scanned or electronic document preferred) the completed CME Disclosure Form to the Continuing Medical Education office as part of this application.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institutional Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tod M. Hanover, MD</td>
<td>Vascular Surgery Faculty</td>
</tr>
</tbody>
</table>

Please allow up to 1 month for approval of your CME activity.

If you have any questions, please feel free to contact:

Rachel Andes – CME Coordinator  
Greenville Health System  
701 Grove Road  
Greenville, South Carolina 29605  
(864) 455-6478

Sally Cade – CME Coordinator  
Greenville Health System  
701 Grove Road  
Greenville, South Carolina 29605  
(864) 455-3552  
s cade@ ghs.org
Department of Surgery – Vascular Surgery Division

Vascular Lab Conference Agenda

3rd Wednesday of every month

Meeting called by: GHS Department of Surgery, Vascular Surgery Division

Vascular Lab Conference


Description:

Vascular Lab Correlation/Teaching Conference will be held the 3rd Wednesday of each month. These educational meetings will serve to keep the Vascular Lab Technologists and physicians compliant with needed CME’s that must be reported to the Intersocietal Accrediting Commission (IAC). Additionally, these meetings will serve as mandatory Quality Improvement meetings also mandated by the IAC.

During these meetings, we will discuss vascular lab case studies as well as correlative imaging such as an angiogram or a CTA. The physicians will discuss the treatment process and the outcomes of the patients. Surgical procedures are discussed as well as stent placement if the patient undergoes these treatments.

Quality Improvement aspects of the meetings involve evaluating technical quality of the Vascular Lab images by reviewing the Doppler angle, Color Doppler gain, waveform analyses, annotation of the images, etc. Quality Improvement aspects of the Vascular Lab report include an evaluation of the correct findings, all findings correlate to an image in the study, the amount of time that it took the reading physician to finalize the report, etc. Other Quality Improvement aspects will evaluate the accuracy of the referring physician order and a discussion of the Appropriate Use Criteria for ordering Vascular Lab studies.

<table>
<thead>
<tr>
<th>Time</th>
<th>Facilitators</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM</td>
<td>Facilitators: Dr. Tod Hanover</td>
<td>CC2</td>
</tr>
<tr>
<td>7:00 AM – 7:05 AM</td>
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### Copies of all Planning Committee Member CV

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### Copies of 2 sources of needs analysis, indicating a need for this type of program for our Upstate region and within GHS practices and GHS staff (journal articles, GHS data from Stephanie Cox, physician relations assessment of referral patterns, etc).

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### Comments:

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Revised 8/1/14

www.ghs.org/CME

701 Grove Rd  •  c/o Continuing Medical Education  •  Greenville, SC 29605-5601  •  (864) 455-3546-Main Line
IAC Standards and Guidelines for Vascular Testing Accreditation
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IAC Standards and Guidelines for Vascular Testing Accreditation

*Published 8/3/2015*
Introduction

The Intersocietal Accreditation Commission (IAC) accredits imaging facilities specific to vascular testing. IAC accreditation is a means by which facilities can evaluate and demonstrate the level of patient care they provide.

A vascular testing facility is a unit performing noninvasive vascular diagnostic testing under the overall direction of a Medical Director. A Technical Director is appointed who is responsible for the direct supervision of all the technical staff and the daily operations of the facility. All interpreting physicians (medical staff) and practicing technologists/sonographers (technical staff) must be adequately trained and experienced to interpret and perform noninvasive vascular testing respectively.

The intent of the accreditation process is two-fold. It is designed to recognize facilities that provide quality vascular testing services. It is also designed to be used as an educational tool to improve the overall quality of the facility.

The following are the specific areas of vascular testing for which accreditation may be obtained:

- extracranial cerebrovascular
- peripheral arterial
- intracranial cerebrovascular
- peripheral venous
- visceral vascular
- screening

These accreditation Standards and Guidelines are the minimum Standards for accreditation of vascular testing facilities. Standards are the minimum requirements to which an accredited facility is held accountable. Guidelines are descriptions, examples, or recommendations that elaborate on the Standards. Guidelines are not required, but can assist with interpretation of the Standards.

Standards are printed in regular typeface in outline form. Guidelines are printed in italic typeface in narrative form.

Standards that are highlighted are content changes that were made as part of the August 3, 2015 revision. These Standards will become effective on February 1, 2016. Facilities applying for accreditation after February 1, 2016 must comply with these new highlighted Standards.

In addition to all Standards listed below, the facility, including all staff, must comply at all times with all federal, state and local laws and regulations, including but not limited to laws relating to licensed scope of practice, facility operations and billing requirements.
Part A: Organization

Section 1A: Personnel and Supervision

STANDARD – Medical Director

1.1A The Medical Director must be a licensed physician, MD or DO, in the state or jurisdiction of the facility and must be qualified to interpret noninvasive vascular examinations.

1.1.1A Medical Director Required Training and Experience

The Medical Director must demonstrate an appropriate level of training and experience by meeting one or more of the following:

1.1.1.1A Formal Training – Completion of a residency or fellowship that includes appropriate didactic and clinical vascular testing experience as an integral part of the program. For those testing areas in which training is provided, the physician must have recent experience within the past three years in interpreting the following minimum number of diagnostic studies under supervision:

   i. extracranial cerebrovascular – 100 cases
   ii. intracranial cerebrovascular – 100 cases
   iii. peripheral arterial physiologic – 100 cases
   iv. peripheral arterial duplex – 100 cases
   v. venous duplex ultrasound – 100 cases
   vi. visceral vascular duplex ultrasound – 75 cases

1.1.1.2A Informal Training – The informal training pathway allows for qualification of interpreting physicians through a combination of Continuing Medical Education (CME) and supervised practical and supervised interpretive experience.

   i. A minimum of 40 hours of relevant Category 1 CME credits must be acquired within the three-year period prior to the initial application.

      • 20 hours must be courses specifically designed to provide knowledge of the techniques, limitations, accuracies and methods of interpretations of noninvasive vascular examinations that the physician will interpret.
      • 20 hours may be dedicated to appropriate clinical topics relevant to noninvasive vascular testing.
      • Eight of the 40 hours must be specific to each testing area the physician will interpret.

   ii. The physician must acquire a minimum of eight hours supervised practical experience for each testing area to be interpreted; observing or participating in testing procedures in a facility accredited for vascular testing.

      Comment: Experience must be documented with a letter from the Medical Director of the facility where the experience was obtained.

   iii. The physician must acquire experience in the interpretation of exams while under the supervision of a physician who has already met the IAC Vascular Testing Standard. Experience must be acquired in each of the testing areas in which the physician will be providing interpretations for the following
minimum number of studies:

- extracranial cerebrovascular – 100 cases
- intracranial cerebrovascular – 100 cases
- peripheral arterial physiologic – 100 cases
- peripheral arterial duplex – 100 cases
- venous duplex ultrasound – 100 cases
- visceral vascular duplex ultrasound – 75 cases

Comment: Interpretive experience must be documented with a letter from the supervising physician of the facility where the experience was obtained indicating the dates of participation and the number of cases in each testing area.

1.1.3A Established Practice – Training and experience will be considered adequate for a physician who has:

i. met the medical staff credentialing qualifications;
ii. has worked in a vascular facility for at least the past three years;
iii. has interpreted at least the following number of diagnostic cases over the past three years in each of the areas that he/she will interpret:
   - extracranial cerebrovascular – 300 cases
   - intracranial cerebrovascular – 300 cases
   - peripheral arterial physiologic – 300 cases
   - peripheral arterial duplex – 300 cases
   - venous duplex ultrasound – 300 cases
   - visceral vascular duplex ultrasound – 225 cases

Comment: A current abnormal case study final report interpreted by each physician applying under the established practice pathway must be submitted in the application.

1.1.4A Physician Credential for Vascular Interpretation

i. Registered Physician in Vascular Interpretation (RPVI)
ii. Certification from the American Society of Neuroimaging (ASN)

Comment: ASN certification is accepted for physicians who interpret extracranial and intracranial examinations only.

1.2A Medical Director Responsibilities

The Medical Director responsibilities include but are not limited to:

1.2.1A all clinical services provided and the quality and appropriateness of the care provided;
1.2.2A supervising the entire operation; may delegate specific duties to appropriate staff;
1.2.3A approval of the medical staff and supervision of their work;
1.2.4A maintaining and assuring compliance to the Standards as outlined in this document.

Comment: If the Medical Director is off site, he/she must have a physical presence in the facility to participate in regular Quality Improvement (QI) meetings, case study review conferences, personnel interviews and other facility operations.
1.1.3A Continuing Medical Education (CME)

1.1.3.1A The Medical Director must show evidence for maintaining current knowledge by participating in CME courses that are relevant to noninvasive vascular testing.

Comment: To be relevant the course content must address principles, instrumentation, techniques or interpretation of noninvasive vascular testing.

i. A minimum of 15 hours of CME is required every three years, of which 10 hours must be Category 1.

Comment: Facility internal Quality Improvement (QI) meetings are not eligible as part of this CME requirement.

ii. The CME requirement will be waived if, in the previous three years prior to the application submission, the Medical Director has:
   - completed formal training;
   - acquired the RPVI credential or ASN certification;
   - been employed in the facility less than one year.

(See Guidelines on Page 13 for further recommendations.)

STANDARD – Technical Director

1.2A A qualified Technical Director must be designated for the facility. The Technical Director is generally a full-time position. If the Technical Director is not onsite full time, he/she must work a minimum of 20% of normal business hours each month. An appropriately credentialed vascular technologist must be appointed in the Technical Director’s absence and report to the Technical Director. The appointed technologist must: supervise and assist others in performing the examinations; oversee day-to-day operations; and communicate weekly with the Technical Director to maintain compliance with the Standards.

Comment: The Medical Director or a member of the medical staff must satisfy the qualifications of the Technical Director to serve in that capacity.

1.2.1A Technical Director Required Training and Experience

The Technical Director must meet the following criteria:

1.2.1.1A The Technical Director must have an appropriate credential in vascular testing:

i. Registered Vascular Technologist (RVT);
ii. Registered Vascular Specialist (RVS);
iii. Registered Technologist Vascular Sonography [RT(VS)];
iv. Registered Diagnostic Medical Sonographer in Abdomen [RDMS (AB)] (visceral vascular testing only);
v. American Society of Neuroimaging (ASN) (extracranial and intracranial testing only);
vi. Registered Phlebology Sonographer (RPhS) (peripheral venous testing only).

1.2.1.2A For each testing area applied for, the Technical Director must have performed the following minimum number of studies:

i. extracranial cerebrovascular – 100 cases
ii. intracranial cerebrovascular – 100 cases
iii. peripheral arterial physiologic – 100 cases
iv. peripheral arterial duplex – 100 cases
v. venous duplex ultrasound – 100 cases
vi. visceral vascular duplex ultrasound – 75 cases

Comment: If the Technical Director does not meet the testing volume requirements for any testing section, a qualified Co-Technical Director must be appointed for those testing sections.

1.2.2A Technical Director Responsibilities

The Technical Director responsibilities include but are not limited to:

1.2.2.1A must report directly to the Medical Director;
1.2.2.2A all facility duties as delegated by the Medical Director;
1.2.2.3A supervision of the technical and ancillary staff (may be delegated);
1.2.2.4A daily technical operation of the facility: staffing, scheduling, record keeping;
1.2.2.5A quality patient care;
1.2.2.6A technical training;
1.2.2.7A operation and maintenance of the equipment;
1.2.2.8A compliance to the Standards as outlined in this document.

1.2.3A Continuing Medical Education (CME)

1.2.3.1A The Technical Director must show evidence of maintaining current knowledge by participating in CME courses that are relevant to vascular testing.

Comment: To be relevant the course content must address principles, instrumentation, techniques or interpretation of noninvasive vascular testing examinations.

i. A minimum of 15 hours of CME is required every three years.

Comment: Facility internal Quality Improvement (QI) meetings are not eligible as part of this CME requirement.

ii. The CME requirement will be waived if, in the previous three years prior to the application submission, the Technical Director has:
   • completed formal training;
   • acquired an appropriate vascular credential;
   • been employed in the facility less than one year.

(See Guidelines on Page 13 for further recommendations.)

STANDARD – Medical Staff

1.3A A qualified medical staff must be designated for the facility. All members of the medical staff must be licensed physicians, MD or DO, and must be qualified to interpret noninvasive vascular examinations.

1.3.1A Medical Staff Required Training and Experience
The medical staff must demonstrate an appropriate level of training and experience by meeting one or more of the following:

1.3.1.1A  Formal Training – Completion of a residency or fellowship that includes appropriate didactic and clinical vascular testing facility experience as an integral part of the program. For those testing areas in which training is provided, the physician must have recent experience within the past three years in interpreting the following minimum number of diagnostic studies under supervision:

i. extracranial cerebrovascular – 100 cases
ii. intracranial cerebrovascular – 100 cases
iii. peripheral arterial physiologic – 100 cases
iv. peripheral arterial duplex – 100 cases
v. venous duplex ultrasound – 100 cases
vi. visceral vascular duplex ultrasound – 75 cases

1.3.1.2A  Informal Training – The informal training pathway allows for qualification of interpreting physicians through a combination of Continuing Medical Education (CME) and supervised practical and supervised interpretive experience.

i. A minimum of 40 hours of relevant Category 1 CME credits must be acquired within the three-year period prior to the initial application.
   - 20 hours must be courses specifically designed to provide knowledge of the techniques, limitations, accuracies and methods of interpretations of noninvasive vascular examinations the physician will interpret.
   - 20 hours may be dedicated to appropriate clinical topics relevant to vascular testing.
   - Eight of the 40 hours must be specific to each testing area the physician will interpret.

ii. The physician must acquire a minimum of 8 hours supervised practical experience for each testing area to be interpreted; observing or participating in testing procedures in a facility accredited for vascular testing.

Comment: Experience must be documented with a letter from the Medical Director of the facility where the experience was obtained.

iii. The physician must acquire experience in the interpretation of examinations while under the supervision of a physician who has already met the IAC Vascular Testing Standard. Experience must be acquired in each of the testing areas in which the physician will be providing interpretations for the following minimum number of studies:

   - extracranial cerebrovascular – 100 cases
   - intracranial cerebrovascular – 100 cases
   - peripheral arterial physiologic – 100 cases
   - peripheral arterial duplex – 100 cases
   - venous duplex ultrasound – 100 cases
   - visceral vascular duplex ultrasound – 75 cases

Comment: Interpretive experience must be documented with a letter from the supervising physician of the facility where the experience was obtained indicating the dates of participation and the number of cases in each testing area.
1.3.1.3A Established Practice – Training and experience will be considered adequate for a physician who has:

i. met the medical staff credentialing qualifications;
ii. has worked in a vascular facility for at least the past three years;
iii. has interpreted at least the following number of diagnostic cases over the past three years in each of the areas that he/she will interpret:

- extracranial cerebrovascular – 300 cases
- intracranial cerebrovascular – 300 cases
- peripheral arterial physiologic – 300 cases
- peripheral arterial duplex – 300 cases
- venous duplex ultrasound – 300 cases
- visceral vascular duplex ultrasound – 225 cases

Comment: A current abnormal case study final report interpreted by each physician applying under the established practice pathway must be submitted in the application.

1.3.1.4A Physician Credential for Vascular Interpretation

i. Registered Physician in Vascular Interpretation (RPVI)
ii. Certification from the American Society of Neuroimaging (ASN)

Comment: ASN certification is accepted for physicians who interpret extracranial and intracranial examinations only.

1.3.2A Medical Staff Responsibilities

Medical staff responsibilities include but are not limited to:

1.3.2.1A interprets and/or performs clinical studies in accordance with privileges approved by the Medical Director and in compliance with the Standards outlined in this document.

1.3.3A Continuing Medical Education (CME)

1.3.3.1A Each medical staff member must show evidence of maintaining current knowledge by participating in CME courses that are relevant to vascular testing.

Comment: To be relevant the course content must address principles, instrumentation, techniques or interpretation of noninvasive vascular testing.

i. A minimum of 15 hours of CME is required every three years, of which 10 hours must be Category 1.

Comment: Facility internal Quality Improvement (QI) meetings are not eligible as part of this CME requirement.

ii. The CME requirement will be waived if, in the previous three years prior to the application submission, the medical staff member has:

- completed formal training;
- acquired the RPVI credential or ASN certification;
- been employed in the facility less than one year.

(See Guidelines on Page 13 for further recommendations.)
STANDARD – Technical Staff

1.4A   A qualified technical staff must be designated for the facility.

1.4.1A  Technical Staff Required Training and Experience

1.4.1.1A  For each testing area applied for, the technical staff member must have performed the following minimum number of studies:

i.  extracranial cerebrovascular – 100 cases
ii.  intracranial cerebrovascular – 100 cases
iii.  peripheral arterial physiologic – 100 cases
iv.   peripheral arterial duplex – 100 cases
v.    venous duplex ultrasound – 100 cases
vi.   visceral vascular duplex ultrasound – 75 cases

Comment: An individual who does not meet the testing volume requirements for any testing section is considered a trainee.

1.4.1.2A  The technical staff must have an appropriate level of training and experience by meeting one or more of the following criteria:

i.  Credential – An appropriate credential in vascular testing.

Comment: By January 2017, all technical staff must have obtained an appropriate credential in vascular testing.

(See Guidelines on Page 13 for further recommendations.)

ii.  Formal Ultrasound Training – Successful completion of a diagnostic ultrasound or cardiovascular technology program with a concentration in vascular technology.

(See Guidelines on Page 13 for further recommendations.)

iii.  Post-secondary education plus 12 months full-time (at least 35 hours per week) clinical vascular testing experience plus one of the following:

•  completion of a formal two-year program or equivalent in another allied health profession;
•  completion of a bachelor’s degree unrelated to vascular technology;
•  a MD or DO degree.

iv.  Experience only:

•  A minimum of 12 months of vascular testing experience with the performance of at least 600 noninvasive vascular examinations under the supervision of medical or technical staff who meet one of the above criteria.
•  These examinations must be appropriately distributed among the testing areas performed in the facility.

Comment: An individual who does not meet one of the above is considered a trainee.
1.4.2A Technical Staff Responsibilities

Technical staff responsibilities include but are not limited to:

1.4.2.1A reporting to the Technical Director;
1.4.2.2A performing clinical examinations and other assigned tasks.

1.4.3A Continuing Medical Education (CME)

1.4.3.1A The technical staff must show evidence of maintaining current knowledge by participating in CME courses that are relevant to vascular testing.

Comment: To be relevant the course content must address principles, instrumentation, techniques or interpretation of noninvasive vascular testing.

1.4.3.2A A minimum of 15 hours of CME is required every three years.

Comment: Facility internal Quality Improvement (QI) meetings are not eligible as part of this CME requirement.

1.4.3.3A The CME requirement will be waived if, in the previous three years prior to the application submission, the technical staff member has:

i. completed formal training;
ii. acquired an appropriate vascular credential;
iii. been employed in the facility less than one year.

(See Guidelines on Page 13 for further recommendations)

STANDARD – Trainees

1.5A Training, if conducted, must not compromise patient care and must benefit the trainee.

1.5.1A Trainee Requirements

1.5.1.1A Supervision: The Medical Director must ensure that the responsibilities assumed by the trainee are appropriate.

1.5.1.2A Trainees must perform examinations only with direct medical and/or technical staff supervision.

STANDARD – Support Services

1.6A Ancillary personnel (clerical, nursing, transport, etc.) necessary for safe and efficient patient care must be provided.

1.6.1A The Medical Director must ensure that support services are appropriate and in the best interest of patient care.

1.6.2A Clerical and administrative support must be sufficient to ensure efficient facility operational record keeping.

1.6.3A Nursing and ancillary services must be sufficient to ensure quality patient care.
Section 1A: Personnel and Supervision

Guidelines

1.1A Medical Director – Continuing Experience

- The monthly volume should be sufficient to maintain proficiency in examination interpretation.
- In general, the Medical Director should interpret a minimum of five noninvasive vascular examinations per month per area of testing.
- The total volume of interpretations may be combined from sources other than the applicant facility.

Comment: Lower volumes than those recommended here should not dissuade a facility that is otherwise compliant from applying for accreditation.

1.2A Technical Director – Continuing Experience

- The monthly volume should be sufficient to maintain proficiency in examination performance.
- In general, the Technical Director should perform a minimum of five noninvasive vascular examinations per month per area of testing.
- The total volume of cases may be combined from sources other than the applicant facility.

Comment: Lower volumes than those recommended here should not dissuade a facility that is otherwise compliant from applying for accreditation.

1.2.3A Technical Director – Continuing Medical Education

- At least one hour of the 15 CME should be relative to work-related musculoskeletal disorders (MSD).

1.3A Medical Staff – Continuing Experience

- The monthly volume should be sufficient to maintain proficiency in examination interpretation.
- In general, the medical staff should interpret a minimum of five noninvasive vascular examinations per month per area of testing.
- The total volume of interpretations may be combined from sources other than the applicant facility.

Comment: Lower volumes than those recommended here should not dissuade a facility that is otherwise compliant from applying for accreditation.

1.4A Technical Staff – Continuing Experience

- The monthly volume should be sufficient to maintain proficiency in examination performance.
- In general, the technical staff should perform a minimum of five noninvasive vascular examinations per month per area of testing.
- The total volume of cases may be combined from sources other than the applicant facility.

Comment: Lower volumes than those recommended here should not dissuade a facility that is otherwise compliant from applying for accreditation.

1.4.1.2Ai Though the Standards include multiple pathways by which a technical staff member may document experience and training, the IAC encourages that all staff members acquire an appropriate credential in vascular testing.

1.4.1.2Aii The program should be accredited by the Commission for Accreditation of Allied Health Education Programs (CAAHEP) in collaboration with the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS) and/or the Joint Review Committee on Education in Cardiovascular Technology (JRC-CVT) or the Canadian Medical Association (CMA).
Section 2A: Facility

STANDARD – Examination Areas

2.1A  Examinations must be performed in a setting providing patient safety, comfort and privacy.

STANDARD – Interpretation Areas

2.2A  Adequate designated space must be provided for the interpretation of examination results and preparation of reports.

STANDARD – Storage

2.3A  Adequate designated space must be provided for the convenient storage of supplies, records and reports.
Section 3A: Examination Reports and Records

STANDARD – Records

3.1A Provisions must exist for the generation and retention of examination records of all studies performed.

3.1.1A Essential portions of all examinations must be documented on media appropriate for long-term storage.

Comment: Final submission of representative case studies to the IAC must be in a digital format (e.g., CD, DVD or flash drive; no videotape recordings will be accepted).

3.1.2A A complete, accurate and signed final report must be generated as outlined in STANDARD: Examination Interpretation and Reports, as part of the record of examination.

3.1.3A All records of the examination, including a signed dated final report must be retained in accordance with applicable state or federal guidelines for medical records, generally five to seven years for adult patients.

STANDARD – Examination Interpretation and Reports

3.2A Noninvasive vascular examinations are interpreted and reported by the Medical Director or a member of the medical staff of the vascular testing facility.

Comment: The report represents the final interpretation of the noninvasive vascular examination and is part of the patient’s legal medical record. As such, the report must be in the form of a document that is retrievable and/or reproducible for review by health care personnel. In general, the report must contain information such that a health care professional previously unfamiliar with the case is provided adequate information regarding the indications for the examination, the type of examination performed and the results of the diagnostic study.

3.2.1A All reporting must be standardized.

3.2.2A All physicians interpreting noninvasive vascular examinations in the facility must agree on and utilize uniform diagnostic criteria and a standardized report format.

3.2.3A Interpretation must include review of all examination data including measurements, images and recordings by the Medical Director or a member of the medical staff.

3.2.4A The report must accurately reflect the content and results of the examination.

3.2.5A The final report must be verified and signed by the Medical Director or a member of the medical staff of the facility.

3.2.6A The final report must be typed and must include, but is not limited to:

3.2.6.1A patient identification;

3.2.6.2A date of the examination;

3.2.6.3A appropriate clinical indications leading to the performance of the examination;

3.2.6.4A an adequate description of the examination performed and must include the name of the examination and its integral parts;
3.2.6.5A description of pertinent positive and negative findings, including velocity measurements;

3.2.6.6A if disease is present it must be characterized according to its location, extent, severity and etiology whenever possible;

3.2.6.7A incidental findings;

3.2.6.8A reasons for a technically limited, suboptimal or incomplete examination;

3.2.6.9A summary (impression/conclusion) of the examination findings;

3.2.6.10A comparison with previous related studies when available;

3.2.6.11A interpreting physician typed name and signature and/or electronic verification;

3.2.6.12A date of interpreting physician signature or verification.

(See Guidelines on Page 20 for further recommendations.)

3.2.7A The interpretation by the Medical Director or a member of the medical staff must be available within two working days of the examination.

Comment: An interpretation can be in the form of paper, digital storage or voice system. The final verified signed report must be available in a timely fashion, generally within four business days.

3.2.8A Identification of the technologist performing the examination must appear as part of the permanent record.

3.2.9A If preliminary findings are provided, the preliminary nature must be clearly indicated.

3.2.9.1A A policy for communication of any significant changes must be defined for those situations in which the final interpretation differs substantially from the preliminary findings.

3.2.10A A policy must be defined whereby the results of the examination that demonstrate urgent or life threatening findings are communicated to the appropriate health care professionals in a timely fashion.

**STANDARD – Interpretation**

3.3A Interpretation using the documented findings and the diagnostic criteria must be performed by the Medical Director or a member of the medical staff to indicate the absence or presence of abnormalities in the sites and vessels that were examined.

3.3.1A Disease, if present, must be characterized according to:

3.3.1.1A severity;

3.3.1.2A location;

3.3.1.3A extent;

3.3.1.4A etiology whenever possible.

Comment: For the requirements of interpretation/final report, refer to **STANDARD – Examination, Interpretation and Reports.**
STANDARD – Diagnostic Criteria

3.4A Each examination performed in the facility must have a single set of written, validated diagnostic criteria to interpret the presence of disease and to document its severity, location, extent and whenever possible etiology.

3.4.1A Diagnostic criteria must be based on published reports or internally generated and internally validated as outlined in Part C: Quality Improvement.

3.5A Extracranial Cerebrovascular

3.5.1A For each extracranial cerebrovascular examination performed there must be diagnostic criteria for the interpretation of:

3.5.1.1A grayscale images;

i. plaque morphology, when reported.

3.5.1.2A spectral Doppler waveforms;

3.5.1.3A spectral Doppler velocities;

3.5.1.4A color Doppler images.

3.5.2A There must be diagnostic criteria for the interpretation of:

3.5.2.1A Internal Carotid Artery (ICA) Stenosis/Disease – These criteria must state how velocity measurements, spectral Doppler waveform analysis and imaging are used to document the severity, location, extent and whenever possible etiology.

i. When interpreted, there must be diagnostic criteria for the interpretation of:

- Common carotid artery (CCA), external carotid artery (ECA), vertebral artery and subclavian artery disease – These criteria must state how velocity measurements, spectral Doppler waveform analysis and imaging are used to document the severity, location, extent and whenever possible etiology.

(See Guidelines on Page 20 for further recommendations.)

3.6A Intracranial Cerebrovascular

3.6.1A For each intracranial cerebrovascular examination performed, there must be diagnostic criteria for the interpretation of:

3.6.1.1A grayscale images (if used);

3.6.1.2A spectral Doppler waveforms;

3.6.1.3A spectral Doppler velocities;

3.6.1.4A color Doppler images (if used).

3.7A Peripheral Arterial

3.7.1A For each peripheral arterial imaging examination (if performed), there must be diagnostic criteria for the interpretation of:

3.7.1.1A grayscale images;
3.7.1.2A spectral Doppler waveforms;
3.7.1.3A spectral Doppler velocities;
3.7.1.4A color Doppler images (if used).

3.7.2A For each of the following peripheral arterial non-imaging examinations (if performed), there must be diagnostic criteria for the interpretation of:

3.7.2.1A ankle brachial index (ABI);
3.7.2.2A segmental limb pressures (if used);
3.7.2.3A continuous wave or pulsed wave Doppler waveforms;
3.7.2.4A air plethysmographic waveforms (PVR);
3.7.2.5A supplemental testing:
  i. photoplethysmography signal amplitude and waveform;
  ii. treadmill exercise/stress testing;
  iii. abdominal aorta examination for aneurysm and/or stenosis.

3.8A Peripheral Venous

3.8.1A For each peripheral venous examination performed there must be diagnostic criteria for the interpretation of:

3.8.1.1A grayscale images;
3.8.1.2A spectral Doppler waveforms;
3.8.1.3A spectral Doppler velocities;
3.8.1.4A color Doppler images.

3.8.2A There must be diagnostic criteria for interpretation of:

3.8.2.1A thrombosis and thrombus aging;
3.8.2.2A patency;
3.8.2.3A vein size;
3.8.2.4A venous reflux in seconds/time;
3.8.2.5A arteriovenous fistula (AVF) or dialysis access grafts;
3.8.2.6A spectral Doppler velocities.

3.9A Visceral Vascular

3.9.1A For each visceral vascular examination performed there must be vessel specific diagnostic criteria for the interpretation of:

3.9.1.1A grayscale images;
3.9.1.2A plaque morphology (when reported);
3.9.1.3A spectral Doppler waveforms;
3.9.1.4A spectral Doppler velocities (when required by the protocol);
3.9.1.5A color Doppler images (if used).

3.10A Screening

3.10.1A For each screening examination performed there must be diagnostic criteria for the interpretation of:

3.10.1.1A grayscale images;
3.10.1.2A spectral Doppler waveforms;
3.10.1.3A spectral Doppler velocities;
3.10.1.4A color Doppler images (if used).

3.10.2A Each screening examination must have specific reporting criteria.

3.10.2.1A Extracranial cerebrovascular screening:

i. absence of disease, normal;
ii. presence of disease with no overall significance;
iii. presence of disease with overall significance;
iv. occlusion.

3.10.2.2A Carotid intima-media thickness screening (CIMT):

i. age, gender and race associated risk according to a standardized table of CIMT measurements should be used to generate a cardiovascular risk assessment report;
ii. plaque characteristics and dimensions should be reported separately;
iii. the report should include standard deviations or prediction ranges for the measurements based on age and gender. Specific measurement values (i.e., mean, maximum, mean maximum) used for the risk prediction report should be the same as those used in the study(s) providing the basis for the risk prediction reporting.

3.10.2.3A Peripheral arterial screening:

i. absence of disease;
ii. presence of disease;
iii. non-diagnostic ABI.

3.10.2.4A Abdominal aorta aneurysm screening:

i. absence of aneurysmal disease;
ii. presence of aneurysmal disease;
iii. aneurysmal status not defined due to non-visualization.
Section 3A: Examination Reports and Records

Guidelines

3.2.6A The final interpretation should address the clinical indications for the examination.

3.5.2.1Ai Criteria for CCA and ECA stenosis have not been validated as extensively as for the ICA and generally the grades of stenosis for these vessels are more broad (e.g., normal, less than 50% diameter reduction, greater than 50% diameter reduction, occlusion).
Section 4A: Facility Safety

STANDARD – Patient and Facility Safety

4.1A Patient safety must be ensured by written policies and procedures approved by the Medical Director.

4.1.1A A policy must be in place to address technical staff safety, comfort and avoidance of work-related musculoskeletal disorders (MSD).

(See Guidelines below for further recommendations.)

4.1.2A A written procedure must be documented for identification of patients who suffer untoward effects or complications of studies performed and a permanent record of such is maintained.

4.1.3A A written procedure must be documented with respect to:

4.1.3.1A control of infectious disease;

4.1.3.2A transducer cleaning;

4.1.3.3A protection of facility personnel from the transmission of infectious disease and blood borne pathogens.

4.1.4A Written procedures must be documented for handling acute medical emergencies and critically ill patients that includes:

4.1.4.1A appropriate equipment;

4.1.4.2A supplies;

4.1.4.3A trained personnel.

4.1.5A The facility must meet the standards as set forth by the Occupational Safety and Health Administration (OSHA) and the Joint Commission (JC) where applicable.

Section 4A: Facility Safety

Guidelines

4.1.1A Comment: For additional information regarding MSD, please visit:


www.sdms.org/OSHA/etool.asp

Section 5A: Administrative

STANDARD – Patient Confidentiality

5.1A All facility personnel must ascribe to professional principles of patient-physician confidentiality as legally required by federal, state, local or institutional policy or regulation.

STANDARD – Patient or Other Customer Complaints

5.2A There must be a policy in place outlining the process for patients or other customers to issue a complaint/grievance in reference to the care/services they received at the facility and how the facility handles complaints/grievances.

STANDARD – Primary Source Verification

5.3A There must be a policy in place identifying how the facility verifies the medical education, training, appropriate licenses and certifications of all physicians as well as the certification and training of all technical staff members and any other direct patient care providers.

Section 5A: Administrative Guidelines

Sample documents are available for each of the required policies listed in Section 5A on the IAC Vascular Testing website at intersocietal.org/vascularseeking/sample_documents.htm.
Section 6A: Multiple Sites (Fixed and/or Mobile)

STANDARD – Multiple Sites

6.1A When testing is performed at more than one physical facility, the facility may be eligible to apply for a single accreditation as a multiple site facility.

6.1.1A All facilities must have the same Medical Director.

6.1.2A All facilities must have the same Technical Director.

6.1.3A Supervision must be accomplished by one or more of the following:

6.1.3.1A the Technical Director works at each site two days per month;

6.1.3.2A every technical staff member from each multi-site works at the main facility two days each month;

6.1.3.3A an appropriately credentialed lead technologist is appointed at each multi-site facility and reports to the Technical Director.

i. The lead technologist must:
   • supervise and assist other technical staff members in performing examinations;
   • oversee the daily activities of the multi-site;
   • communicate weekly with the Technical Director to maintain compliance with the IAC Vascular Testing Standards.

6.1.4A Identical examination protocols must be utilized at all sites.

6.1.5A Identical diagnostic criteria must be utilized at all sites.

6.1.6A Quality Improvement (QI) must be performed at each site for all applicable testing areas.

6.1.7A Equipment of similar quality and capability must be utilized at all sites.

Section 6A: Multiple Sites (Fixed and/or Mobile) Guidelines

Facilities needing complete details on adding a multiple site should review the current IAC Policies and Procedures available on the IAC website at intersocietal.org/iac/legal/policies.htm.
Part B: Examinations and Procedures

Section 1B: Extracranial Cerebrovascular Testing

STANDARD – Indications

1.1B Extracranial cerebrovascular testing must be performed for appropriate clinical indications

1.1.1B The indication for testing must be documented prior to performing the examination.

(See Guidelines on Page 27 for further recommendations.)

STANDARD – Equipment

1.2B Equipment must provide accurate data.

1.2.1B Imaging Equipment – Duplex ultrasound with color flow Doppler must be provided with:

1.2.1.1B imaging frequencies appropriate for the structures evaluated;
1.2.1.2B Doppler frequencies appropriate for the vessels evaluated;
1.2.1.3B range-gated spectral Doppler with the ability to adjust the depth and position of the range gate within the area of interest;
1.2.1.4B a Doppler angle which is measurable and adjustable;
1.2.1.5B a visual display and a permanent recording of the image;
1.2.1.6B a visual display, an audible output, and a permanent recording of the Doppler waveform and corresponding image which includes the Doppler angle.

1.2.2B Equipment Quality Control

1.2.2.1B Equipment used for diagnostic testing must be maintained in good operating condition.
1.2.2.2B Equipment maintenance must include, but is not limited to:

i. record the method and frequency of maintenance of all imaging equipment;
ii. establishment of and adherence to a policy regarding routine safety inspections and testing of all facility electrical equipment;
iii. establishment of and adherence to an equipment cleaning schedule that includes routine cleaning of equipment parts, including filters and transducers, according to specifications of the manufacturer.

(See Guidelines on Page 27 for further recommendations.)

STANDARD – Protocols

1.3B Each examination performed in the facility must have a written protocol. The protocol must include:

1.3.1B equipment to be used for each examination;
1.3.2B elements of proper technique (also see STANDARD – Techniques);

1.3.3B anatomic extent that constitutes a complete examination includes the evaluation of the entire course of the acceptable portion of each vessel:

1.3.3.1B bilateral testing is considered a complete examination;

1.3.3.2B variations in technique following vascular intervention;

1.3.3.3B variations in technique and documentation for limited examinations.

1.3.4B documentation that must be acquired for normal examinations and the additional documentation that must be acquired to describe abnormalities, if present (also see STANDARD – Documentation);

1.3.5B a description of how color Doppler or other flow imaging modes (e.g., power Doppler) are used to supplement grayscale imaging, spectral Doppler and velocity measurements.

*(See Guidelines on Page 27 for further recommendations.)*

**STANDARD – Techniques**

1.4B Appropriate techniques must be used for the evaluation of the extracranial cerebrovascular system to assess for the presence of any abnormalities and to document their severity, location, extent and whenever possible etiology.

1.4.1B Elements of proper technique include, but are not limited to:

1.4.1.1B performance of an examination according to the facility specific, written protocol;

1.4.1.2B proper patient positioning;

1.4.1.3B patient preparation;

1.4.1.4B appropriate equipment and transducer selection;

1.4.1.5B appropriate transducer positioning;

1.4.1.6B proper sample volume size and positioning;

1.4.1.7B optimization of equipment gain and display settings;

1.4.1.8B a spectral Doppler angle of 60 degrees or less with respect to the vessel wall and/or direction of blood flow when measuring velocities;

1.4.1.9B proper measurement of spectral velocities as required by the protocol;

1.4.1.10B identification of vessels by imaging and Doppler.

**STANDARD – Documentation**

1.5B Each examination performed in the facility must provide documentation as required by the protocol that is sufficient to allow proper interpretation, including but not limited to:

1.5.1B grayscale images;

1.5.2B color Doppler images;
1.5.3B Doppler waveforms;
1.5.4B velocity measurements;
1.5.5B other images and waveforms as required by the protocol;
1.5.6B other measurements as required by the protocol.

1.6B Abnormalities will require additional images and waveforms that demonstrate the severity, location, extent and whenever possible etiology of the abnormality present.

1.6.1B Areas of suspected stenosis or obstruction must include representative Doppler waveforms and velocity measurements recorded at and distal to the stenosis or obstruction.

1.7B Extracranial Cerebrovascular Documentation

1.7.1B Long axis grayscale images must be documented as required by the protocol and must include at a minimum:

1.7.1.1B common carotid artery;
1.7.1.2B carotid artery bifurcation;
1.7.1.3B internal carotid artery.

1.7.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

1.7.2.1B proximal common carotid artery;
1.7.2.2B mid/distal common carotid artery;
1.7.2.3B proximal internal carotid artery;
1.7.2.4B distal internal carotid artery (as distal as possible);
1.7.2.5B one site in the external carotid artery;
1.7.2.6B one site in the vertebral artery.

1.7.3B Abnormalities require additional images, waveforms and velocity measurements.

STANDARD – Procedure Volumes

1.8B Records must be maintained that permit evaluation of annual procedure volumes. These records must include:

1.8.1B indication for the examination;
1.8.2B technologist performing the examination;
1.8.3B examination(s) performed;
1.8.4B examination findings;
1.8.5B physician interpreting the examination.

(See Guidelines on Page 27 for further recommendations.)
Section 1B: Extracranial Cerebrovascular Testing Guidelines

1.1B When available, appropriateness criteria published by medical professional organizations should be utilized.

Comment: An accepted indication is generally written by the referring health care provider. In some instances it can only be assessed at the time of the examination.

1.2.2.2B The cleaning schedule for each system will depend on the degree of use and should be frequent enough to allow for accurate collection of data.

1.3B The protocol should include the indications for a limited examination and the descriptions of the limited examination. Separate limited examination protocols may also be written.

1.8B The annual procedure volume should be sufficient to maintain proficiency in examination techniques and interpretation.

• In general, a facility should perform a minimum of 100 complete examinations annually.
Section 2B: Intracranial Cerebrovascular Testing

STANDARD – Indications

2.1B Intracranial cerebrovascular testing must be performed for appropriate clinical indications.

2.1.1B The indication for testing must be documented prior to performing the examination.

(See Guidelines on Page 32 for further recommendations.)

STANDARD – Equipment

2.2B Equipment must provide accurate data.

2.2.1B Imaging Equipment – Duplex ultrasound with color flow Doppler, if used for testing, must be provided with:

2.2.1.1B imaging frequencies appropriate for the structures evaluated;
2.2.1.2B Doppler frequencies appropriate for the vessels evaluated;
2.2.1.3B range-gated spectral Doppler with the ability to adjust the depth and position of the range gate within the area of interest;
2.2.1.4B a Doppler angle which is measurable and adjustable;
2.2.1.5B a visual display and a permanent recording of the image;
2.2.1.6B a visual display, an audible output, and a permanent recording of the Doppler waveform and corresponding image which includes the Doppler angle.

2.2.2B Continuous wave (CW) and pulsed wave (PW) Doppler, if used for testing, must be provided with:

2.2.2.1B a direction sensitive Doppler blood flow meter;
2.2.2.2B Doppler transducer frequencies appropriate for the vessels evaluated;
2.2.2.3B Doppler waveform display demonstrating bidirectional flow and signal intensity;
2.2.2.4B an audible output and a permanent recording of the waveform.

2.2.3B Automated software packages (if used for testing such as automated emboli detection or calculators of hemodynamic indices) must be provided with:

2.2.3.1B evidence of validation for the intended application.

2.2.4B Equipment Quality Control

2.2.4.1B Equipment used for diagnostic testing must be maintained in good operating condition.

2.2.4.2B Equipment maintenance must include, but is not limited to:

i. record of the method and frequency of maintenance of all imaging equipment and non-imaging equipment;
ii. establishment of and adherence to a policy regarding routine safety inspections and testing of all facility electrical equipment;

iii. establishment of and adherence to an equipment cleaning schedule that includes routine cleaning of equipment parts, including filters and transducers, according to specifications of the manufacturer.

(See Guidelines on Page 32 for further recommendations.)

STANDARD – Protocols

2.3B Each examination performed in the facility must have a written protocol. The protocol must include:

2.3.1B equipment to be used for each examination;

2.3.2B elements of proper technique (also see STANDARD – Techniques);

2.3.3B anatomic extent that constitutes a complete examination includes the evaluation of the entire course of the accessible portion of each vessel;

2.3.4B bilateral testing is considered a complete examination:

2.3.4.1B anterior and posterior circulations including flow detection via temporal, orbital (when appropriate);

2.3.4.2B foraminal and submandibular (when appropriate) windows must be described;

2.3.4.3B variations in technique following vascular intervention;

2.3.4.4B variations in technique and documentation for limited examinations.

2.3.5B separate written protocols for additional intracranial cerebrovascular examinations (if performed) must include, but may not be limited to:

2.3.5.1B emboli detection;

2.3.5.2B vasomotor reactivity;

2.3.5.3B right-to-left shunt;

2.3.5.4B assessment of cerebral circulatory arrest;

2.3.5.5B peri-procedural or intra-operative monitoring;

2.3.5.6B monitoring of reperfusion therapies in acute stroke;

2.3.5.7B monitoring in the neuro-intensive care setting.

2.3.6B documentation that must be acquired for normal exams and the additional documentation that must be acquired to describe abnormalities, if present (also see STANDARD – Documentation);

2.3.7B a description of how color Doppler or other flow imaging modes (e.g., power Doppler) are used to supplement grayscale imaging, spectral Doppler and velocity measurements;

2.3.8B depth ranges for each vessel segment in adults and children (when appropriate);

2.3.9B extent of power reduction to be used for transorbital examinations.
2.3.9.1B For patient safety, the output power must not exceed 10% of maximum emitted power or 17 mW per cm² or equivalent measurements.

(See Guidelines on Page 32 for further recommendations.)

STANDARD – Techniques

2.4B Appropriate techniques must be used for the evaluation of the intracranial cerebrovascular system to assess for the presence of any abnormalities and to document their severity, location, extent and whenever possible etiology.

2.4.1B Elements of proper technique include, but are not limited to:

2.4.1.1B performance of an examination according to the written, facility specific protocol;
2.4.1.2B proper patient positioning;
2.4.1.3B patient preparation;
2.4.1.4B appropriate equipment and transducer selection;
2.4.1.5B appropriate transducer positioning;
2.4.1.6B proper sample volume size, depth and positioning;
2.4.1.7B optimization of equipment gain and display settings;
2.4.1.8B spectral Doppler angle and placement as required by the protocol;
2.4.1.9B proper measurement of spectral velocities as required by the protocol;
2.4.1.10B identification of vessels by imaging and Doppler.

(See Guidelines on Page 32 for further recommendations.)

STANDARD – Documentation

2.5B Each examination performed in the facility must provide documentation as required by the protocol that is sufficient to allow proper interpretation, including but not limited to:

2.5.1B grayscale images (if imaging used);
2.5.2B color Doppler images (if imaging used);
2.5.3B Doppler waveforms;
2.5.4B velocity measurements;
2.5.5B other images (if used) and waveforms as required by the protocol;
2.5.6B other measurements as required by the protocol.

2.6B Abnormalities will require additional images (if imaging used) and waveforms that demonstrate the severity, location, extent and whenever possible etiology of the abnormality present.

2.6.1B Areas of suspected stenosis or obstruction must include representative Doppler waveforms and velocity measurements recorded at and distal to the stenosis or obstruction.
2.7B Intracranial Cerebrovascular Documentation

2.7.1B Spectral Doppler waveforms, velocity measurements, flow direction and signal intensity must be documented as required by the protocol and must include at a minimum:

2.7.1.1B proximal M1 middle cerebral artery MCA;
2.7.1.2B A1 anterior cerebral artery (ACA);
2.7.1.3B cross-filling via anterior communicating artery (when detectable);
2.7.1.4B terminal internal carotid artery (TICA);
2.7.1.5B collateral flow via posterior communicating artery (when detectable);
2.7.1.6B P1 or P2 posterior cerebral artery (PCA);
2.7.1.7B ophthalmic artery (when appropriate);
2.7.1.8B internal carotid artery (ICA) siphon;
2.7.1.9B terminal vertebral artery (VA);
2.7.1.10B proximal and distal basilar artery;
2.7.1.11B distal ICA segment at the entrance to the skull (when appropriate).

2.7.2B Depth ranges for these segments in adults and children (when appropriate) must be documented.

2.7.3B Abnormalities require additional images, waveforms and velocity measurements.

STANDARD – Procedure Volumes

2.8B Records must be maintained that permit evaluation of annual procedure volumes. These records must include:

2.8.1B indication for the examination;
2.8.2B technologist performing the examination;
2.8.3B examination(s) performed;
2.8.4B examination findings;
2.8.5B physician interpreting the examination.

(See Guidelines on Page 32 for further recommendations.)
## Section 2B: Intracranial Cerebrovascular Testing Guidelines

### 2.1B

When available, appropriateness criteria published by medical professional organizations should be utilized.

*Comment: An accepted indication is generally written by the referring health care provider. In some instances it can only be assessed at the time of the examination.*

### 2.2.4.2B

The cleaning schedule for each system will depend on the degree of use and should be frequent enough to allow for accurate collection of data.

### 2.3B

The protocol should include the indications for a limited examination and the descriptions of the limited examination. Separate limited examination protocols may also be written.

### 2.4.1B

Headgear for monitoring transducer fixation should be used (when appropriate).

### 2.8B

The annual procedure volume should be sufficient to maintain proficiency in examination techniques and interpretation.

- In general, a facility should perform a minimum of 100 complete examinations annually.
Section 3B: Peripheral Arterial Testing

STANDARD – Indications

3.1B Peripheral arterial testing must be performed for appropriate clinical indications.

3.1.1B The indication for testing must be documented prior to performing the examination.

(See Guidelines on Page 40 for further recommendations.)

STANDARD – Equipment

3.2B Equipment must provide accurate data.

3.2.1B Imaging Equipment – Duplex ultrasound with color flow Doppler, if used for testing, must be provided with:

3.2.1.1B imaging frequencies appropriate for the structures evaluated;
3.2.1.2B Doppler frequencies appropriate for the vessels evaluated;
3.2.1.3B range-gated spectral Doppler with the ability to adjust the depth and position of the range gate within the area of interest;
3.2.1.4B a Doppler angle which is measurable and adjustable;
3.2.1.5B a visual display and a permanent recording of the image;
3.2.1.6B a visual display, an audible output, and a permanent recording of the Doppler waveform and corresponding image which includes the Doppler angle.

3.2.2B Continuous wave (CW) and pulsed wave (PW) Doppler, if used for testing, must be provided with:

3.2.2.1B a direction sensitive Doppler blood flow meter;
3.2.2.2B Doppler transducer frequencies appropriate for the vessels evaluated;
3.2.2.3B Doppler waveform display demonstrating bidirectional flow;
3.2.2.4B an audible output and a permanent recording of the waveform.

3.2.3B Segmental limb plethysmography, if used for testing, must be provided with:

3.2.3.1B equipment capable of measuring small segmental volume changes and providing permanent recordings;
3.2.3.2B cuffs of varying sizes appropriate to the technique and the limb segment to be evaluated.

3.2.4B Supplemental Equipment

3.2.4.1B Photoplethysmography (PPG), if used for testing, must be provided with:

i. appropriate electrical coupling for signal display;
ii. capability of providing a permanent recording of the waveform.
3.2.4.2B Limb air plethysmography (pulse volume recording-PVR), if used for testing, must be provided with:

i. appropriately sized pneumatic cuffs;
ii. capability of being calibrated before each examination;
iii. capability of measuring small limb volume changes;
iv. capability of providing a permanent recording of the data.

3.2.4.3B Treadmill exercise/stress testing, if used for testing, must be provided with:

i. motor-driven treadmill capable of providing constant speed and inclination.

Comment: Other forms of standardized exercise may be utilized as defined by the facility protocol.

Comment: If additional examinations are performed and additional testing equipment is utilized and is not listed here, a written protocol, diagnostic criteria and quality improvement methods must be in place and available for review upon request.

3.2.5B Equipment Quality Control

3.2.5.1B Equipment used for diagnostic testing must be maintained in good operating condition.

3.2.5.2B Equipment maintenance must include, but is not limited to:

i. record of the method and frequency of maintenance of all imaging equipment and non-imaging equipment;
ii. establishment of and adherence to a policy regarding routine safety inspections and testing of all facility electrical equipment;
iii. establishment of and adherence to an equipment cleaning schedule that includes routine cleaning of equipment parts, including filters and transducers, according to specifications of the manufacturer.

(See Guidelines on Page 40 for further recommendations.)

STANDARD – Protocols

3.3B Each examination performed in the facility must have a written protocol. The protocol must include:

3.3.1B equipment to be used for each examination;
3.3.2B elements of proper technique (also see STANDARD – Techniques);
3.3.3B anatomic extent that constitutes a complete examination includes evaluation of the entire course of the accessible portion of each vessel:

3.3.3.1B bilateral testing is considered a complete examination;
3.3.3.2B variations in technique following vascular intervention;
3.3.3.3B variations in technique and documentation for limited examinations must be described.

3.3.4B the performance of an ankle brachial index (ABI);
3.3.5B the acquisition of waveforms (either CW or PW or PVR) from at least three levels;

3.3.6B the measurement of systolic blood pressure at more than one level if indicated;

3.3.7B documentation that must be acquired for normal examinations and the additional documentation that must be acquired to describe abnormalities, if present (also see STANDARD – Documentation);

3.3.8B a description of how color Doppler or other flow imaging modes (e.g., power Doppler) are used to supplement grayscale imaging, spectral Doppler and velocity measurements.

(See Guidelines on Page 40 for further recommendations.)

STANDARD – Techniques

3.4B Appropriate techniques must be used for the evaluation of the peripheral arterial system to assess for the presence of any abnormalities and to document their severity, location, extent and whenever possible etiology.

3.4.1B Examinations must include:

3.4.1.1B Performance of an ABI.

i. Measurement of upper extremity (brachial artery) systolic pressures must be obtained from both arms and the higher of the two pressures used to calculate the ABI.

ii. Measurement of ankle systolic pressures must be obtained bilaterally from the distal posterior tibial (PT) artery and distal anterior tibial (AT)/dorsalis pedis (DP) artery and the higher of the two pressures on each side used to calculate the ABI.

3.4.1.2B Additional information regarding the presence of disease may be obtained by recording toe waveforms and toe systolic pressures, particularly in cases when the ABI may be non-diagnostic.

3.4.2B Elements of proper technique include, but are not limited to:

3.4.2.1B performance of an examination according to the facility specific, written protocol;

3.4.2.2B proper patient positioning;

3.4.2.3B patient preparation;

3.4.2.4B appropriate equipment and transducer selection;

3.4.2.5B appropriate transducer positioning;

3.4.2.6B proper sample volume size and positioning;

3.4.2.7B optimization of equipment gain and display settings;

3.4.2.8B a spectral Doppler angle of 60 degrees or less with respect to the vessel wall and/or direction of blood flow when measuring velocities;

3.4.2.9B proper measurement of spectral velocities as required by the protocol;

3.4.2.10B identification of vessels by imaging and Doppler.
STANDARD – Documentation

3.5B Each examination performed in the facility must provide documentation as required by the protocol that is sufficient to allow proper interpretation, including but not limited to:

3.5.1B Ankle brachial index (ABI):

3.5.1.1B Duplex ultrasound used to evaluate arteries and/or bypass grafts must include measurement and documentation of the ankle brachial indices that is generally performed at the time of the examination. Previous ABI measurements may only be used if:

i. the ABI is performed within two weeks prior to the duplex examination;
ii. was performed in the same facility;
iii. there has been no change in the patient’s symptoms;
iv. the results and date of the previous ABI must be included in the final report.

3.5.1.2B CW Doppler or PW Doppler or PVR waveforms.

3.5.2B grayscale images;

3.5.3B color Doppler images;

3.5.4B Doppler waveforms;

3.5.5B velocity measurements;

3.5.6B other images if used and waveforms as required by the protocol;

3.5.7B other measurements as required by the protocol.

3.6B Abnormalities will require additional images and waveforms that demonstrate the severity, location, extent and whenever possible etiology of the abnormality present.

3.6.1B Areas of suspected stenosis or obstruction must include representative Doppler waveforms and velocity measurements recorded at and distal to the stenosis or obstruction.

3.7B Peripheral Arterial Documentation

3.7.1B Duplex ultrasound of lower extremity arteries (if performed) must include:

3.7.1.1B Long axis grayscale images and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. common femoral artery;
ii. superficial femoral artery;
iii. proximal deep femoral artery;
iv. popliteal artery;
v. aorta, common and external iliac arteries and tibial arteries (when appropriate);
vi. bypass graft(s) when present including anastomoses.

3.7.1.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. common femoral artery;
ii. superficial femoral artery;
iii. proximal deep femoral artery;
iv. popliteal artery;
v. tibial arteries;
vi. aorta, common and external iliac arteries (when appropriate);
vii. bypass graft when present, including proximal and distal anastomoses, inflow and outflow arteries.

3.7.1.3B Abnormalities require additional images, waveforms and velocity measurements.

3.7.2B Duplex ultrasound of upper extremity arteries (if performed) must include:

3.7.2.1B Long axis grayscale images and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. subclavian artery;
ii. axillary artery;
iii. brachial artery;
iv. innominate and forearm arteries (when appropriate);
v. bypass graft(s) when present including anastomoses.

3.7.2.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. subclavian artery;
ii. axillary artery;
iii. brachial artery;
iv. radial and ulnar arteries;
v. innominate artery (when appropriate);
vi. bypass graft when present, including proximal and distal anastomoses, inflow and outflow arteries.

3.7.2.3B Abnormalities require additional images, waveforms and velocity measurements.

3.8B Non-imaging (physiologic) examinations (if performed) must include bilateral sampling from three or more levels. Only one type of waveform is required (CW Doppler or PW Doppler or PVR).

3.8.1B Doppler waveforms (either CW or PW) must be documented as required by the protocol and must include at a minimum:

3.8.1.1B common femoral artery;
3.8.1.2B popliteal artery;
3.8.1.3B distal tibial arteries at the level of the ankle.

3.8.2B Plethysmographic waveforms must be documented from:

3.8.2.1B thigh;
3.8.2.2B calf;
3.8.2.3B ankle;
3.8.2.4B toe waveforms (if indicated);
3.8.2.5B toe systolic pressures (if indicated).

3.9B Supplemental testing (if performed) may include:

Comment: Supplemental testing techniques are inadequate for use alone to diagnose and grade the severity of peripheral arterial disease.

3.9.1B Photoplethysmography (if performed) must be documented as required by the protocol and must include at a minimum:

3.9.1.1B documentation of the digital waveforms.

3.9.2B Treadmill exercise/stress testing, if performed, must be documented as required by the protocol and must include at a minimum:

3.9.2.1B pressures obtained at rest;
3.9.2.2B pressures obtained at timed intervals immediately after exercise;
3.9.2.3B for treadmill-based protocols, the time of onset of claudication and maximal walking time.

3.9.3B Abdominal aorta examinations (if performed) must be documented as required by the protocol and must include at a minimum:

Comment: The facility can include abdominal aorta examinations as part of the peripheral arterial application only if the facility performs other peripheral arterial examinations. If the facility does not perform any other peripheral arterial examinations, abdominal aorta examinations can be included in the visceral vascular testing section.

3.9.3.1B Transverse view (defined as perpendicular to the long axis of the aorta) grayscale images with the single widest outer wall to outer wall diameter measurement must be documented as required by the protocol and must include at a minimum:

i. proximal aorta;
ii. mid aorta;
iii. distal aorta;
iv. common iliac arteries at the bifurcation.

3.9.3.2B Long axis grayscale images must be documented as required by the protocol and must include at a minimum:

i. proximal aorta;
ii. mid aorta;
iii. distal aorta;
iv. documentation of aneurysms (if present) must include the widest size of the aorta measured outer wall to outer wall;
v. additional images proximal and distal to the aneurysm.

3.9.3.3B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. aorta at/or proximal to the renal artery origins;
ii. mid aorta;
iii. distal aorta;
iv. right common iliac artery;
v. left common iliac artery.

(See Guidelines on Page 40 for further recommendations.)

3.9.3.4B Abnormalities require additional images, waveforms and velocity measurements.

3.9.4B Arteriovenous fistula (AVF)/dialysis access grafts, if performed, must be documented as required by the protocol and must include at a minimum:

3.9.4.1B A description of the type of fistula or graft.

3.9.4.2B Long axis grayscale and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. inflow artery proximal to graft or fistula;
ii. anastomotic site(s);
iii. outflow vein;
iv. axillary and subclavian veins (when appropriate).

3.9.4.3B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. inflow artery;
ii. proximal and distal anastomoses (graft);
iii. anastomosis site (fistula);
iv. outflow vein beyond anastomosis.

3.9.4.4B If evaluation includes provocative maneuvers for steal phenomenon, digital image documentation of findings with and without maneuvers.

Comment: Spectral Doppler imaging of the ipsilateral axillary and subclavian veins should be obtained to document proximal patency.

3.9.4.5B Abnormalities require additional images, waveforms and velocity measurements.

STANDARD – Procedure Volumes

3.10B Records must be maintained that permit evaluation of annual procedure volumes. These records must include:

3.10.1B indication for the examination;
3.10.2B technologist performing the examination;
3.10.3B examination(s) performed;
3.10.4B examination findings;
3.10.5B physician interpreting the examination.

(See Guidelines on Page 40 for further recommendations.)
Section 3B: Peripheral Arterial Testing

Guidelines

3.1B When available, appropriateness criteria published by medical professional organizations should be utilized.

Comment: An accepted indication is generally written by the referring health care provider. In some instances it can only be assessed at the time of the examination.

3.2.5.2B The cleaning schedule for each system will depend on the degree of use and should be frequent enough to allow for accurate collection of data.

3.3B The protocol should include the indications for a limited examination and the descriptions of the limited examination. Separate limited examination protocols may also be written.

3.9.3.3B Color Doppler images may supplement grayscale imaging but does not substitute for it.

3.10B The annual procedure volume should be sufficient to maintain proficiency in examination techniques and interpretation.

- In general, a facility should perform a minimum of 100 complete examinations annually.
Section 4B: Peripheral Venous Testing

STANDARD – Indications

4.1B peripheral venous testing must be performed for appropriate clinical indications.

4.1.1B The indication for testing must be documented prior to performing the examination.

(See Guidelines on Page 47 for further recommendations.)

STANDARD – Equipment

4.2B Equipment must provide accurate data.

4.2.1B Imaging Equipment – Duplex ultrasound with color flow Doppler must be provided with:

4.2.1.1B imaging frequencies appropriate for the structures evaluated;

4.2.1.2B Doppler frequencies appropriate for the vessels evaluated;

4.2.1.3B range-gated spectral Doppler with the ability to adjust the depth and position of the range gate within the area of interest;

4.2.1.4B a Doppler angle which is measurable and adjustable;

4.2.1.5B a visual display and a permanent recording of the image;

4.2.1.6B a visual display, an audible output, and a permanent recording of the Doppler waveform and corresponding image which includes the Doppler angle.

4.2.2B Equipment Quality Control

4.2.2.1B Equipment used for diagnostic testing must be maintained in good operating condition.

4.2.2.2B Equipment maintenance must include, but is not limited to:

i. record the method and frequency of maintenance of all imaging equipment and;

ii. establishment of and adherence to a policy regarding routine safety inspections and testing of all facility electrical equipment;

iii. establishment of and adherence to an equipment cleaning schedule that includes routine cleaning of equipment parts, including filters and transducers, according to specifications of the manufacturer.

(See Guidelines on Page 47 for further recommendations.)

STANDARD – Protocols

4.3B Each examination performed in the facility must have a written protocol. The protocol must include:

4.3.1B equipment to be used for each examination;

4.3.2B elements of proper technique (also see STANDARD – Techniques);
4.3.3B anatomic extent that constitutes a complete examination includes evaluation of the entire course of the accessible portion of each vessel:

4.3.3.1B variations in technique following vascular interventions, including dialysis access;

4.3.3.2B variations in technique and documentation for limited exams.

4.3.4B documentation that must be acquired for normal examinations and the additional documentation that must be acquired to describe abnormalities, if present (also see STANDARD – Documentation);

4.3.5B a description of how color Doppler or other flow imaging modes (e.g., power Doppler) are used to supplement grayscale imaging and spectral Doppler measurements.

(See Guidelines on Page 47 for further recommendations.)

STANDARD – Techniques

4.4B Appropriate techniques must be used for the evaluation of the peripheral venous system, stents, arteriovenous fistula (AVF) / dialysis access grafts to assess for the presence of any abnormalities and to document their severity, location, extent and whenever possible etiology.

4.4.1B Elements of proper technique include, but are not limited to:

4.4.1.1B performance of an examination according to the facility specific, written protocol;

4.4.1.2B proper patient positioning;

i. for assessing reflux: standing, sitting or reverse Trendelenburg (at least 15 degrees) must be used to maintain lower extremity dependency.

4.4.1.3B patient preparation;

4.4.1.4B appropriate equipment and transducer selection;

4.4.1.5B appropriate transducer positioning;

4.4.1.6B proper sample volume size and positioning;

4.4.1.7B optimization of equipment gain and display settings;

4.4.1.8B proper measurements as required by the protocol:

i. vein diameter measurements must:
   • be acquired with the extremity(s) in a dependent position;
   • be measured anterior outer wall to posterior outer wall;
   • assure that no external pressure is applied to the vein.

4.4.1.9B identification of vessels by imaging and Doppler;

4.4.1.10B transverse grayscale imaging without and with transducer compressions;

4.4.1.11B long axis spectral Doppler evaluation with or without color imaging.
STANDARD – Documentation

4.5B Each examination performed in the facility must provide documentation as required by the protocol that is sufficient to allow proper interpretation, including but not limited to:

4.5.1B grayscale images;
4.5.2B color Doppler images;
4.5.3B Doppler waveforms;
4.5.4B velocity measurements;
4.5.5B other images and waveforms as required by the protocol;
4.5.6B other measurements as required by the protocol.

4.6B Abnormalities will require additional images and waveforms that demonstrate the severity, location, extent and whenever possible etiology.

4.6.1B Areas of suspected obstruction must include representative Doppler waveforms recorded at and distal to the obstruction.

4.7B Peripheral Venous Documentation

4.7.1B Lower Extremity Venous Duplex for Thrombosis and Patency

4.7.1.1B Transverse grayscale images without and with transducer compressions (when anatomically possible or not contraindicated) must be documented as required by the protocol and must include at a minimum:

i. common femoral vein;
ii. saphenofemoral junction;
iii. proximal femoral vein;
iv. mid femoral vein;
v. distal femoral vein;
vi. popliteal vein;
vii. posterior tibial veins;
viii. peroneal veins;
ix. additional images to document areas of suspected thrombus;
x. additional images (if required by the facility protocol).

(See Guidelines on Page 47 for further recommendations.)

4.7.1.2B Spectral Doppler waveforms demonstrating spontaneous venous flow, phasicity and/or flow augmentation must be documented as required by the protocol and must include at a minimum:

i. right and left common femoral veins;
ii. popliteal vein;
iii. additional waveforms if required by the facility protocol.

Comment: For unilateral examinations, spectral Doppler waveforms must be documented from the right and left common femoral veins.
4.7.1.3B Abnormalities require additional images, waveforms and velocity measurements.

4.7.2B Lower Extremity Venous Duplex for Reflux

4.7.2.1B Transverse grayscale images without and with transducer compressions (when anatomically possible or not contraindicated) must be documented as required by the protocol and must include at a minimum:

- common femoral vein;
- saphenofemoral junction;
- mid femoral vein;
- great saphenous vein;
- popliteal vein;
- small saphenous vein.

(See Guidelines on Page 47 for further recommendations.)

4.7.2.2B Spectral Doppler waveforms with the extremity(s) in a dependent position, demonstrating baseline flow and response to distal augmentation and if reflux is present, duration of retrograde flow measured with calipers and documented as required by the protocol and must include at a minimum:

- common femoral vein;
- saphenofemoral junction;
- great saphenous vein;
- mid femoral vein;
- popliteal vein;
- small saphenous vein.

(See Guidelines on Page 47 for further recommendations.)

4.7.2.3B Transverse grayscale images of diameter measurement must be documented as required by the protocol and must include at a minimum:

- saphenofemoral junction;
- great saphenous vein at proximal thigh;
- great saphenous vein at knee;
- small saphenous vein (at saphenopopliteal junction).

(See Guidelines on Page 47 for further recommendations.)

4.7.3B Upper Extremity Venous Duplex for Thrombosis and Patency

4.7.3.1B Transverse grayscale images without and with transducer compressions (when anatomically possible or not contraindicated) must be documented as required by the protocol and must include at a minimum:

- internal jugular vein;
- subclavian vein;
- axillary vein;
- brachial vein(s);
- basilic vein;
- cephalic vein;
vii. additional images to document areas of suspected thrombus;
viii. additional images if required by the facility protocol.

*(See Guidelines on Page 47 for further recommendations.)*

**4.7.3.2B** Spectral Doppler waveforms demonstrating spontaneous venous flow, phasicity and/or flow augmentation must be documented as required by the protocol and must include at a minimum:

i. internal jugular vein;
ii. right and left subclavian veins;
iii. axillary vein;
iv. additional waveforms if required by the facility protocol.

Comment: For unilateral examinations, spectral Doppler waveforms must be documented from the right and left subclavian vein.

*(See Guidelines on Page 47 for further recommendations.)*

**4.7.4B** Vein mapping, if performed, must include:

**4.7.4.1B** assessment of the veins required by the facility protocol;

**4.7.4.2B** vein patency and size.

**4.7.5B** Venous stents (if present) must include at a minimum:

**4.7.5.1B** Spectral Doppler waveforms with color Doppler images as required by the protocol and must include at a minimum:

i. proximal stent;
ii. mid stent;
iii. distal stent;
iv. native vessel adjacent to the proximal end of the stent;
v. native vessel adjacent to distal end of the stent.

**4.7.6B** Arteriovenous fistula (AVF)/dialysis access grafts, if performed, must be documented as required by the protocol and must include at a minimum:

**4.7.6.1B** A description of the type of fistula or graft.

**4.7.6.2B** Long axis grayscale images and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. inflow artery proximal to graft or fistula;
ii. anastomotic site(s);
iii. outflow vein;
iv. axillary and subclavian veins (when appropriate).

**4.7.6.3B** Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. inflow artery;
ii. proximal and distal anastomoses (graft);
iii. anastomosis site (fistula);
iv. outflow vein beyond anastomosis.

4.7.6.4B If evaluation includes provocative maneuvers for steal phenomenon, digital image documentation of findings with and without maneuvers.

Comment: Spectral Doppler imaging of the ipsilateral axillary and subclavian veins should be obtained to document proximal patency.

4.7.6.5B Abnormalities require additional images, waveforms and velocity measurements.

STANDARD – Procedure Volumes

4.8B Records must be maintained that permit evaluation of annual procedure volumes. These records must include:

4.8.1B indication for the examination;
4.8.2B technologist performing the examination;
4.8.3B examination(s) performed;
4.8.4B examination findings;
4.8.5B physician interpreting the examination.

*(See Guidelines on Page 47 for further recommendations.)*
Section 4B: Peripheral Venous Testing

Guidelines

4.1B When available, appropriateness criteria published by medical professional organizations should be utilized.

Comment: An accepted indication is generally written by the referring health care provider. In some instances it can only be assessed at the time of the examination.

4.2.2.2B The cleaning schedule for each system will depend on the degree of use and should be frequent enough to allow for accurate collection of data.

4.3B The protocol should include the indications for a limited examination and the descriptions of the limited examination. Separate limited examination protocols may also be written.

4.7.1.1B Additional sites may be required by the facility protocol or when indicated – common iliac, external iliac, great saphenous, small saphenous, proximal deep femoral, gastrocnemius, soleal, anterior tibial or perforating veins or inferior vena cava.

- When indicated or required by the facility's written protocol, vein size measurements must be recorded.

4.7.1.2B, 4.7.2.1B Additional sites may be required by the facility protocol or when indicated – common iliac, external iliac, proximal deep femoral, deep calf, or perforating veins or inferior vena cava.

4.7.2.2B Additional sites may be required by the facility protocol or when indicated – common iliac, external iliac, proximal deep femoral, deep calf, perforating veins or other accessory venous tributaries, inferior vena cav.

4.7.3.1B Additional sites may be required by the facility protocol or when indicated – jugular/subclavian vein junction, brachiocephalic (innominate) vein or forearm veins.

- When indicated or required by the facility's written protocol, vein size measurements must be recorded.

4.7.3.2B Additional sites may be required by the facility protocol or when indicated – jugular/subclavian confluence, brachiocephalic (innominate) vein, brachial vein, basilic vein, cephalic vein or forearm veins.

4.8B The annual procedure volume should be sufficient to maintain proficiency in examination techniques and interpretation.

- In general, a facility should perform a minimum of 100 complete examinations annually.
Section 5B: Visceral Vascular Testing

STANDARD – Indications

5.1B Visceral vascular testing must be performed for appropriate clinical indications.

5.1.1B The indication for testing must be documented prior to performing the examination.

(See Guidelines on Page 54 for further recommendations.)

STANDARD – Equipment

5.2B Equipment must provide accurate data.

5.2.1B Imaging Equipment – Duplex ultrasound with color flow Doppler must be provided with:

5.2.1.1B imaging frequencies appropriate for the structures evaluated;

5.2.1.2B Doppler frequencies appropriate for the vessels evaluated;

5.2.1.3B range-gated spectral Doppler with the ability to adjust the depth and position of the range gate within the area of interest;

5.2.1.4B a Doppler angle which is measurable and adjustable;

5.2.1.5B a visual display and a permanent recording of the image;

5.2.1.6B a visual display, an audible output, and a permanent recording of the Doppler waveform and corresponding image which includes the Doppler angle.

5.2.2B Equipment Quality Control

5.2.2.1B Equipment used for diagnostic testing must be maintained in good operating condition.

5.2.2.2B Equipment maintenance must include, but is not limited to:

i. record the method and frequency of maintenance of all imaging equipment;
ii. establishment of and adherence to a policy regarding routine safety inspections and testing of all facility electrical equipment;
iii. establishment of and adherence to an equipment cleaning schedule that includes routine cleaning of equipment parts, including filters and transducers, according to specifications of the manufacturer.

(See Guidelines on Page 54 for further recommendations.)

STANDARD – Protocols

5.3B Each examination performed in the facility must have a written protocol. The protocol must include:

5.3.1B the equipment to be used for each examination;

5.3.2B the elements of proper technique (also see STANDARD – Techniques);
5.3.3B anatomic extent that constitutes a complete examination includes evaluation of the entire course of the accessible portion of each vessel:

5.3.3.1B variations in technique following vascular intervention;

5.3.3.2B variations in technique and documentation for limited examinations must be described.

Comment: A complete examination includes evaluation of the entire course of the accessible portions of each vessel. A limited examination is a subset of the complete examination. There may be recurring indications for a limited examination.

5.3.4B documentation that must be acquired for normal examinations and the additional documentation that must be acquired to describe abnormalities, if present (also see STANDARD – Documentation);

5.3.5B a description of how color Doppler or other flow imaging modes (e.g., power Doppler) are used to supplement grayscale imaging, spectral Doppler and velocity measurements.

(See Guidelines on Page 54 for further recommendations.)

5.4B Visceral vascular examinations comprise the following visceral vascular systems:

5.4.1B mesenteric arterial system;

5.4.2B hepatoporal system;

5.4.3B renal vasculature;

5.4.4B renal transplant;

5.4.5B liver transplant.

5.5B Visceral vascular testing comprises several distinct examinations because different indications require specific vascular systems to be evaluated.

5.5.1B Each visceral vascular system requires several vessels to be examined.

5.5.2B Some examinations also require grayscale imaging of the appropriate organ.

STANDARD – Techniques

5.6B Appropriate techniques must be used for the evaluation of each visceral vascular system to assess for the presence of any abnormalities and to document their severity, location, extent and whenever possible etiology.

5.6.1B Elements of proper technique include, but are not limited to:

5.6.1.1B performance of an examination according to the facility specific, written protocol;

5.6.1.2B proper patient positioning;

5.6.1.3B patient preparation;

5.6.1.4B appropriate equipment and transducer selection;

5.6.1.5B appropriate transducer positioning;

5.6.1.6B proper sample volume size and positioning;
5.6.1.7B optimization of equipment gain and display settings;

5.6.1.8B a spectral Doppler angle of 60 degrees or less with respect to the vessel wall and/or direction of blood flow when measuring velocities;

5.6.1.9B proper measurement of spectral velocities as required by the protocol;

5.6.1.10B identification of vessels by imaging and Doppler.

STANDARD – Documentation

5.7B Each examination performed in the facility must provide documentation as required by the protocol that is sufficient to allow proper interpretation, including but not limited to:

5.7.1B grayscale images;

5.7.2B color Doppler images;

5.7.3B Doppler waveforms;

5.7.4B velocity measurements;

5.7.5B other images and waveforms as required by the protocol;

5.7.6B other measurements as required by the protocol.

5.8B Abnormalities will require additional images and waveforms that demonstrate the severity, location, extent and whenever possible etiology of the abnormality present.

5.8.1B Documentation areas of suspected stenosis or obstruction must include representative Doppler waveforms and velocity measurements recorded at and distal to the stenosis or obstruction.

5.9B Visceral Vascular Documentation

5.9.1B Mesenteric Arterial System

5.9.1.1B Grayscale and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. adjacent aorta to celiac or superior mesenteric artery;

ii. celiac artery;

iii. superior mesenteric artery;

iv. inferior mesenteric artery.

5.9.1.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. adjacent aorta;

ii. celiac artery origin;

iii. hepatic artery (does not require velocity measurements);

iv. superior mesenteric artery origin;

v. proximal superior mesenteric artery (beyond the origin);

vi. inferior mesenteric artery.
5.9.2B Hepatoportal System

5.9.2.1B Grayscale and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. intrahepatic portal vein;
ii. extrahepatic portal vein;
iii. hepatic veins;
iv. inferior vena cava;
v. adjacent liver parenchyma;
vi. portosystemic shunts or collateral pathways (when present).

5.9.2.2B Spectral Doppler waveforms must be documented as required by the protocol and must include at a minimum:

i. common portal vein;
ii. right portal vein;
iii. left portal vein;
iv. superior mesenteric vein;
v. splenic vein;
vi. right, left and middle hepatic veins;
vii. inferior vena cava;
viii. portosystemic shunts (when present).

5.9.2.3B Transjugular Intrahepatic Portosystemic Shunt (TIPS) require angle corrected waveforms and velocity measurements, must be documented as required by the protocol and must include at a minimum:

i. portal vein inflow;
ii. left and right portal veins (does not require velocity measurements);
iii. portal end stent;
iv. mid stent;
v. hepatic end stent;
vi. hepatic vein outflow (does not require velocity measurements).

5.9.3B Renal Vasculature

5.9.3.1B Grayscale and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. aorta at the level of the renal arteries;
ii. renal arteries;
iii. renal artery and vein at the hilum;
iv. grayscale pole to pole renal length measurements.

5.9.3.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. aorta at the level of the renal arteries;
ii. origin/ostia of the renal artery;
iii. proximal main renal artery;
iv. mid main renal artery;
v. distal main renal artery;
vi. parenchymal/hilar arteries (when appropriate);
vii. accessory renal artery (when present);
viii. renal veins, when appropriate (does not require velocity measurements).

Comment: A complete renal vasculature examination includes a bilateral evaluation.

5.9.4B Renal Transplant

5.9.4.1B Grayscale and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. transplant renal artery;
ii. transplant renal vein;
iii. grayscale images of transplant kidney and peri-transplant region.

5.9.4.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. donor artery;
ii. region of arterial anastomosis;
iii. proximal transplant renal artery;
iv. distal transplant renal artery;
v. parenchyma/hilar arteries;
vi. transplant renal vein (does not require velocity measurements);
vii. renal vein at or near anastomosis (does not require velocity measurements).

5.9.5B Liver Transplant

5.9.5.1B Grayscale and/or color Doppler images must be documented as required by the protocol and must include at a minimum:

i. color Doppler of intrahepatic portal vein;
ii. color Doppler of extrahepatic portal vein;
iii. color Doppler of hepatic veins;
iv. color Doppler of the left and right portal veins;
v. hepatic artery;
vi. inferior vena cava;
vi. grayscale images of transplant liver and peri-transplant region.

5.9.5.2B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. donor hepatic artery in the region of the anastomosis;
ii. hepatic artery;
iii. left and right hepatic arteries (does not require velocity measurements);
iv. hepatic veins (does not require velocity measurements);
v. portal vein anastomosis;
vi. portal vein;
vii. inferior vena cava (does not require velocity measurements).
5.9.6B Abdominal aorta examinations (if performed) must be documented as required by the protocol and must include at a minimum.

Comment: The facility can include abdominal aorta examinations as part of the peripheral arterial application only if the facility performs other peripheral arterial examinations. If the facility does not perform any other peripheral arterial examinations, abdominal aorta examinations can be included in the visceral vascular testing section.

5.9.6.1B Transverse view (defined as perpendicular to the long axis of the aorta) grayscale images with the single widest outer wall to outer wall diameter measurement must be documented as required by the protocol and must include at a minimum:

i. proximal aorta;
ii. mid aorta;
iii. distal aorta;
iv. common iliac arteries at the bifurcation.

5.9.6.2B Long axis grayscale images must be documented as required by the protocol and must include at a minimum:

i. proximal aorta;
ii. mid aorta;
iii. distal aorta;
iv. documentation of aneurysms (if present) must include the widest size of the aorta measured outer wall to outer wall. Additional images proximal and distal to the aneurysm must be recorded.

5.9.6.3B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:

i. aorta at/or proximal to the renal artery origins;
ii. mid aorta;
iii. distal aorta;
iv. right common iliac artery;
v. left common iliac artery.

(See Guidelines on Page 54 for further recommendations.)

STANDARD – Procedure Volumes

5.10B Records must be maintained that permit evaluation of annual procedure volumes. These records must include:

5.10.1B indication for the examination;
5.10.2B technologist performing the examination;
5.10.3B examination(s) performed;
5.10.4B examination findings;
5.10.5B the physician interpreting the examination.

(See Guidelines on Page 54 for further recommendations.)
Section 5B: Visceral Vascular Testing
Guidelines

5.1B When available, appropriateness criteria published by medical professional organizations should be utilized.

Comment: An accepted indication is generally written by the referring health care provider. In some instances it can only be assessed at the time of the examination.

5.2.2.2B The cleaning schedule for each system will depend on the degree of use and should be frequent enough to allow for accurate collection of data.

5.3B The protocol should include the indications for a limited examination and the descriptions of the limited examination. Separate limited examination protocols may also be written.

5.9.6.3B Color Doppler images may supplement grayscale imaging but does not substitute for it.

5.10B The annual procedure volume should be sufficient to maintain proficiency in examination techniques and interpretation.

• In general, a facility should perform a minimum of 100 complete examinations annually.
Section 6B: Screening Testing

Introduction: Facilities must be accredited in the testing areas for which screening will be provided.

STANDARD – Indications

6.1B Screening examinations are performed to determine the presence or absence of peripheral vascular, cerebrovascular disease or to evaluate risk for cardiovascular or cerebrovascular events in participants without specific signs or symptoms.

6.1.1B Screening guidelines for the appropriate selection of participants should be based upon contemporary scientific publications.

6.1.2B Screening cannot replace diagnostic examinations for symptomatic individuals.

STANDARD – Equipment

6.2B Equipment must provide accurate data.

6.2.1B **Imaging Equipment** – Duplex ultrasound with color flow Doppler must be provided with:

6.2.1.1B imaging frequencies appropriate for the structures evaluated;

6.2.1.2B Doppler frequencies appropriate for the vessels evaluated;

6.2.1.3B range-gated spectral Doppler with the ability to adjust the depth and position of the range gate within the area of interest;

6.2.1.4B a Doppler angle which is measurable and adjustable;

6.2.1.5B a visual display and a permanent recording of the image;

6.2.1.6B a visual display, an audible output, and a permanent recording of the Doppler waveform and corresponding image which includes the Doppler angle.

6.2.2B Continuous wave (CW) and pulsed wave (PW) Doppler, if used for testing, must be provided with:

6.2.2.1B a direction sensitive Doppler blood flow meter;

6.2.2.2B Doppler transducer frequencies appropriate for the vessels evaluated;

6.2.2.3B Doppler waveform display demonstrating bidirectional flow;

6.2.2.4B an audible output and a permanent recording of the waveform;

6.2.2.5B cuffs of varying widths appropriate to the limb segment to be evaluated.

6.2.3B Computerized assisted electronic calipers or semiautomatic edge detection software must be utilized for CIMT.

6.2.4B Equipment Quality Control

6.2.4.1B Equipment used for testing must be maintained in good operating condition.

6.2.4.2B Equipment maintenance must include, but is not limited to:
6.2.4.3B recording of the method and frequency of maintenance of all imaging equipment and non-imaging equipment;

6.2.4.4B establishment of and adherence to a policy regarding routine safety inspections and testing of all facility electrical equipment;

6.2.4.5B establishment of and adherence to an equipment cleaning schedule that includes routine cleaning of equipment parts, including filters and transducers, according to specifications of the manufacturer.

**STANDARD – Protocols**

6.3B Each screening examination performed must have a written protocol. The protocol must include:

6.3.1B equipment to be used for each examination;

6.3.2B the elements of proper technique (also see **STANDARD – Techniques**);

6.3.3B the anatomic extent that constitutes a screening examination;

6.3.3.1B Bilateral testing is considered a complete screening examination.

6.3.4B the documentation that must be acquired for screening examinations and the additional documentation that must be acquired to describe abnormalities, if present (also see **STANDARD – Documentation**);

6.3.5B a description of how color Doppler or other flow imaging modes (e.g., power Doppler) are used to supplement grayscale imaging, spectral Doppler and velocity measurements;

6.4B Vascular screening examinations must be interpreted and reported by the Medical Director or a member of the medical staff of the screening service.

**STANDARD – Techniques**

6.5B Appropriate techniques must be used for screening exams to assess the presence or absence of any abnormalities.

6.5.1B Elements of proper technique include, but are not limited to:

6.5.1.1B performance of an examination according to the facility specific, written protocol;

6.5.1.2B proper patient positioning;

6.5.1.3B patient preparation;

6.5.1.4B appropriate equipment and transducer selection;

6.5.1.5B appropriate transducer positioning;

6.5.1.6B proper sample volume size and positioning;

6.5.1.7B optimization of equipment gain and display settings;

6.5.1.8B a spectral Doppler angle of 60 degrees or less with respect to the vessel wall and/or direction of blood flow when measuring velocities;

6.5.1.9B proper measurement of spectral velocities as required by the protocol;
6.5.1.10B identification of vessels by imaging and Doppler;

6.5.1.11B use of computerized assisted electronic calipers or semiautomatic edge detection software for CIMT measurements;

6.5.1.12B ankle brachial index (ABI):
   i. measurement of upper extremity (brachial artery) systolic pressures must be obtained from both arms and the higher of the two pressures used to calculate the ABI;
   ii. measurement of ankle systolic pressures must be obtained bilaterally from the distal posterior tibial (PT) artery and distal anterior tibial (AT)/dorsalis pedis (DP) artery and the higher of the two pressures on each side used to calculate the ABI.

STANDARD – Documentation

6.6B Each screening examination must provide sufficient documentation to allow proper interpretation including, but not limited to:
   6.6.1B grayscale images;
   6.6.2B Doppler waveforms;
   6.6.3B velocity measurements;
   6.6.4B other measurements or images as required by the screening protocol.

6.7B Vascular screening examinations are interpreted and reported by the Medical Director or a member of the medical staff of the screening service.

6.8B A final screening report or document that describes the results of the examination findings and recommended follow-up must be provided to the participant and/or participant’s physicians.

6.9B Extracranial Cerebrovascular Screening
   6.9.1B Spectral Doppler waveforms and velocity measurements must be documented as required by the protocol and must include at a minimum:
      6.9.1.1B Normal Examination:
         i. One site in the proximal internal carotid artery with peak systolic and end diastolic velocity measurements.
      6.9.1.2B Abnormal Examination:
         i. Peak systolic and end diastolic velocity measurements documenting area(s) of significant findings in accordance with the screening diagnostic criteria.

6.10B Carotid Intima-Media Thickness (CIMT) Screening

Comment: CIMT has been effectively used as a marker of atherosclerosis in many patient populations and has also been used as a primary endpoint demonstrating therapeutic efficacy with different pharmacologic therapies. Studies using CIMT to make treatment decisions based on a single IMT measurement, with documentation of the outcome for specific interventions, for individual patients, are lacking. The IAC does not advocate use of carotid IMT as a screening method for atherosclerotic risk until further peer-reviewed literature evolves. If providers choose to perform CIMT testing, rigorous methodological protocols should be strictly followed.
6.10.1B Long axis grayscale images must be documented as required by the protocol and must include at a minimum:

6.10.1.1B measurements obtained during end diastole from at least three longitudinal imaging planes (optimal and two complementary imaging planes – anterior, lateral or posterior to the optimal angle);

6.10.1.2B measurements from the far wall of the distal 1-2 cm of the CCA. Measurements may also be obtained from the near wall of the CCA segment, as well as the near and far wall of the bifurcation and the proximal 1 cm of the ICA.

6.10.1.3B when plaque is present, characterization and/or dimensions.

6.11B Peripheral Arterial Screening

6.11.1B Ankle brachial index (ABI):

6.11.1.1B bilateral brachial artery systolic pressures;

6.11.1.2B bilateral ankle systolic pressures from the distal posterior tibial (PT) artery and distal anterior tibial (AT)/dorsalis pedis (DP) artery.

6.12B Abdominal Aorta Aneurysm Screening

6.12.1B Grayscale images must be documented as required by the protocol and must include at a minimum:

6.12.1.1B Normal Examination:

i. One transverse image (defined as perpendicular to the long axis of the aorta) with the single widest outer wall to outer wall diameter measurement.

6.12.1.2B Abnormal Examination:

i. One transverse image (defined as perpendicular to the long axis of the aorta) with the single widest outer wall to outer wall diameter measurement.

   ii. One transverse image (defined as perpendicular to the long axis of the aorta) with the single widest outer wall to outer wall diameter measurement of a non-dilated segment for comparison.

STANDARD – Procedure Volumes

6.13B Records must be maintained that permit evaluation of annual procedure volumes. These records must include information on:

6.13.1B indication for the examination;

6.13.2B examination(s) performed;

6.13.3B findings.

(See Guidelines on Page 59 for further recommendations.)
Section 6B: Screening Testing
Guidelines

6.13B The annual procedure volume should be sufficient to maintain proficiency in examination techniques and interpretation.

- In general, a facility should perform a minimum of 50 (25 for CIMT) screening examinations per testing section annually.
Part C: Quality Improvement

Section 1C: Quality Improvement Program

STANDARD – QI Program

1.1C The facility must have a written Quality Improvement (QI) program to evaluate all types of procedures performed in the facility on an ongoing basis. The QI program must include the QI measures outlined below but may not be limited to the evaluation and review of:

1.1.1C test appropriateness;
1.1.2C technical quality and, if applicable, safety of the imaging;
1.1.3C interpretive quality review;
1.1.4C report completeness and timeliness; and
1.1.5C case review.

STANDARD – QI Oversight

1.2C The Medical Director, staff and/or an appointed QI Committee must provide oversight to the QI program including but not limited to review of the reports of QI evaluations and any corrective actions taken to address any deficiencies.
Section 2C: Quality Improvement Measures

STANDARD – General QI Measures

2.1C  Facilities are required to have a process in place to evaluate the QI measures outlined in sections 2.1.1C through 2.1.5C.

2.1.1C  Test Appropriateness

2.1.1.1C  The facility must evaluate the appropriateness of the test performed and categorize as:

i.  appropriate/usually appropriate;

ii.  may be appropriate;

iii.  rarely appropriate/usually not appropriate.

(See Guidelines on Page 62 for further recommendations.)

2.1.2C  Technical Quality Review

2.1.2.1C  The facility must evaluate the technical quality and, if applicable, the safety of the test performed. The review must include but is not limited to the evaluation of:

i.  the images/procedure data for suboptimal images/procedure data or artifact;

ii.  completeness of the study; and

iii.  adherence to the facility imaging/data acquisition protocols.

2.1.3C  Interpretive Quality Review

2.1.3.1C  The facility must evaluate the quality and accuracy of the interpretation based on the acquired images/procedure data for all types of procedures performed in the facility.

2.1.4C  Final Report Completeness and Timeliness

2.1.4.1C  The facility must evaluate the final report for completeness and timeliness as required in the Standards.

2.1.5C  Case Review

2.1.5.1C  Case review with any appropriate imaging modality, surgical findings, clinical outcome or other comparison of a minimum of four cases annually with at least two cases per relevant testing area (extracranial, intracranial, arterial, venous, visceral, screening).
Section 2C: Quality Improvement Measures

Guidelines

2.1.1C There should be a mechanism for education of referring physicians to improve the appropriateness of testing.
Section 3C: Quality Improvement Meetings

STANDARD – QI Meetings

3.1C Quality Improvement (QI) Meetings

3.1.1C The facility must have a minimum of two QI meetings per year, one of which is to review the results of the QI analyses and any additional QI-related topics.

3.1.2C All staff must participate in at least one meeting per year.
Section 4C: Quality Improvement Documentation

STANDARD – QI Documentation

4.1C QI Documentation and Record Retention

4.1.1C The facility QI documentation must include but is not limited to:

4.1.1.1C the data for all of the QI measures;

4.1.1.2C minutes from the QI meetings; and

4.1.1.3C participant list (may include remote participation and/or review of minutes).

4.1.2C The QI documentation must be maintained and available for all appropriate personnel to review.
Bibliography


Q1: FORM 7 Disclosure of Relevant Financial Relationships By CME Committee Members and Attendees, Speakers, Authors, Moderators, Planners and Attendees of CME Activities The intent of this disclosure is to allow the Greenville Health System the opportunity to resolve any potential conflicts of interest to assure balance, independence, objectivity and scientific rigor in all of its CME activities. All faculty and planners of Greenville Health System activities are expected to disclose to Greenville Health System any relevant financial relationships with any commercial interest that produces health care goods or services related to the content of the education presentation in which they are involved. An individual who refuses to disclose relevant financial relationships will be disqualified from being a planning committee member, a teacher, or an author of CME, and cannot have control of nor responsibility for, the development, management, presentation or evaluation of the CME activity. Definition of Terms Conflict of interest: Circumstances create a conflict of interest when an individual has an opportunity to affect CME content about products or services of a commercial interest with which he/she has a financial relationship. Commercial interest: is any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on patients. The ACCME does not consider providers of clinical services directly to patients to be commercial interests. Financial relationships: Those relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, ownership interest (e.g., stocks, stock options or other ownership interest, excluding diversified mutual funds), or other financial benefit. Financial benefits are usually associated with roles such as employment, management position, independent contractor (including contracted research), consulting, teaching, membership on advisory committees or review panels, board membership, and other activities for which remuneration is received or expected. Relevant financial relationships would include those within the past 12 months of the person involved in the activity and his/her spouse or partner. Relevant financial relationships of your spouse or partner are those of which you are aware at the time of this disclosure. I have read the above statement: Yes
Q2: This Disclosure is for Participation in any/all CME Committee Meetings, Annual and/or Regularly Scheduled Series (GHS Topic, Case, Journal Club, Enduring, Simulation Based) Activities. Dates of Activities: September 1, 2015 through August 31, 2016. It is only necessary to complete this form once in this time span. Do you or your spouse/partner (past 12 months) have relevant financial relationships with proprietary entities producing health care goods or services related to the content of this activity? (Please check the correct box below.)  

No

Q3: Financial Relationship
Grant/Research Support (indicate the Commercial Interest/Organization)  
Respondent skipped this question

Q4: Consultant (indicate the Commercial Interest/Organization)  
Respondent skipped this question

Q5: Speaker’s Bureau(s): Commercial Interest/Organization  
Respondent skipped this question

Q6: If on Speaker’s Bureau, please answer the following: Do you plan to recommend the exclusive use of one or more of its products or services?  
Respondent skipped this question

Q7: How often do you speak on behalf of the company for the product specific education?  
Respondent skipped this question

Q8: How often do you receive an honorarium for a CME presentation that is funded by the company?  
Respondent skipped this question

Q9: Major Stock Shareholder (indicate the Commercial Interest/Organization)  
Respondent skipped this question

Q10: Other Financial/Material Support (indicate the Commercial Interest/Organization)  
Respondent skipped this question

Q11: In an effort to comply with the SCMA requirement to resolve any potential conflicts of interest to assure balance, independence, objectivity and scientific rigor in all CME activities, we are asking that you consider at least one or more of the following options to assist the GHS/CME department in its responsibility to ensure appropriate choice of speakers and planners. SPEAKER: Resolving an Identified Potential Conflict of Interest (indicate at least one from the following):

Q12: PLANNER OPTIONS: Resolving an Identified Potential Conflict of Interest  
Respondent skipped this question
Q13: I (Speakers, Authors, Moderators, Planners and Attendees) agree that my recommendations involving clinical medicine in this CME activity will be based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients. All scientific research referred to, reported or used in support or justification of patient care recommendations will conform to the generally accepted standards of experimental design, data collection and analysis. I further agree to disclose when discussion of an unlabeled use of a product or an investigational use not yet approved occurs during the course of the presentation. Please provide your full name, title and specialty.

Tod Hanover  MD.  Vascular Surgery
CURRICULUM VITAE

TOD M. HANOVER, M.D.  F.A.C.S
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Education

1979 – 1980 University of Lowell
Lowell, Massachusetts

1980 – 1983 University of Tennessee – Knoxville
Bachelor of Arts, Psychology
Phi Beta Kappa

1984 – 1988 University of Tennessee College of Medicine
Doctor of Medicine

Internship

1988 – 1989 General Surgery Internship
Boston University

Residency

Greenville Hospital System
Greenville, South Carolina

2003 - 2005 Vascular Surgery Residency
Greenville Hospital System
Greenville, South Carolina

Employment

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1994 – Sept 2003 Walters Surgical Associates
Whiteville, NC

July 2015
Professional Societies

American College of Surgeons - Fellow
Southeastern Surgical Congress
Southern Association for Vascular Surgery
Society for Vascular Surgery – candidate group
South Carolina Vascular Surgical Society

Certification

Board Certified – American College of Surgeons
December 1995

Board Certified – American College of Surgeons – Vascular
2006

Fellow American College of Surgeons

Registered Vascular Technician

Registered Physician in Vascular Interpretation – 2012

Academic and Clinical Appointments

Medical Director – Limb Salvage 2013 – Present
Greenville Health System
Greenville, SC

Medical Director - Vascular Lab 2010 - Present
Greenville Health System
Greenville, SC

Medical Director - 2013
Clemson University CVT Program
Clemson, SC

Publications


July 2015


Presentations


5. Hanover TM. Carotid Artery Disease. 2nd Annual GHS Ultrasound Symposium, Greenville, SC, Oct. 5-6, 2012


Abstracts


Personal

Married - Susan

July 2015
Q1 **Overall Meeting Content:**

Answered: 66  Skipped: 1

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**Q2 Meeting Format:**
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Q3 Likelihood Content will Change Medical Practice:

Answered: 67   Skipped: 0

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Total 67
Q4 List one or more ways this program’s educational content will change your medical practice with your patients:

Answered: 38  Skipped: 29

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<td>3/15/2016 5:03 PM</td>
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<tr>
<td>12</td>
<td>it opened my eyes to angles of patient care I had not seen before.</td>
<td>3/15/2016 8:47 AM</td>
</tr>
<tr>
<td>13</td>
<td>Networked w/case manager who taught me about the Pheonix website to electronically request incontinence supplies for my patients. Also lecture on ABA access helped to clarify how the wait list process and new waiver program work.</td>
<td>3/11/2016 6:27 PM</td>
</tr>
<tr>
<td>14</td>
<td>Be mindful of patient families</td>
<td>3/9/2016 1:49 PM</td>
</tr>
<tr>
<td>15</td>
<td>Better understanding of development-provide good stimulation activities</td>
<td>3/8/2016 3:11 PM</td>
</tr>
<tr>
<td>16</td>
<td>Conference mostly confirmed current practice.</td>
<td>3/5/2016 2:43 PM</td>
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<td>17</td>
<td>NAS talk</td>
<td>3/4/2016 3:25 PM</td>
</tr>
<tr>
<td>18</td>
<td>Taking more into account the importance of life stresses in the development of my patients.</td>
<td>3/4/2016 10:35 AM</td>
</tr>
<tr>
<td>19</td>
<td>Will incorporate some ideas about educating and empowering families and children with neurodevelopmental disabilities</td>
<td>3/3/2016 10:49 PM</td>
</tr>
<tr>
<td>20</td>
<td>Increased focus on challenges faced by the parents and extended family members of my patients</td>
<td>3/2/2016 12:32 PM</td>
</tr>
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<td>21</td>
<td>Developmental screening Medical-Legal Partnership</td>
<td>3/1/2016 4:10 PM</td>
</tr>
<tr>
<td>22</td>
<td>Provides me with more information on brain development to better connect with my patients and their families.</td>
<td>3/1/2016 2:09 PM</td>
</tr>
<tr>
<td>23</td>
<td>Better understand the developmenting mind in first 3 years. Good review of genetics by Dr. Everman</td>
<td>3/1/2016 9:29 AM</td>
</tr>
<tr>
<td>24</td>
<td>Education regarding electrophysiological treatments.</td>
<td>3/1/2016 8:41 AM</td>
</tr>
<tr>
<td>25</td>
<td>Looking at how to build parental capabilities in order to make a child strong/improving their outcomes.</td>
<td>3/1/2016 8:23 AM</td>
</tr>
<tr>
<td>26</td>
<td>Knowing that strong brain connections is enhanced by constant use, I will encourage my parents to continually do the activities being taught in therapy to their children so that their kids will hopefully develop the skills being taught to them</td>
<td>2/29/2016 10:43 PM</td>
</tr>
<tr>
<td>27</td>
<td>We will ask more questions about parent/ caregiver health &amp; well being instead of only focusing on the child.</td>
<td>2/29/2016 8:55 AM</td>
</tr>
<tr>
<td>28</td>
<td>I have learned different approaches and ways of presenting education to patients and families. I will also implement positive behavior support into my treatment of not only pediatric but all patients.</td>
<td>2/29/2016 8:05 AM</td>
</tr>
<tr>
<td>29</td>
<td>Referrals to Help Me Grow, Parent Connections, etc.; Considering Medical-Legal Practices and use as a resource for families w/ issues and conflict</td>
<td>2/29/2016 7:11 AM</td>
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<td>---</td>
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<tr>
<td>30</td>
<td>increase awareness of early trauma and impact on developmental trends</td>
<td>2/28/2016 12:21 PM</td>
</tr>
<tr>
<td>31</td>
<td>consciousness of the patients early life stressors</td>
<td>2/28/2016 8:58 AM</td>
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<tr>
<td>32</td>
<td>i have a better understanding re the IDEA program guidelines</td>
<td>2/27/2016 5:46 PM</td>
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<tr>
<td>33</td>
<td>Was interested in the legal information provided...may make more legal referrals</td>
<td>2/27/2016 10:39 AM</td>
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<tr>
<td>34</td>
<td>Some great information to use to understand brain development and challenges with children… how to positively impact children with issues unseen</td>
<td>2/27/2016 9:36 AM</td>
</tr>
<tr>
<td>35</td>
<td>Helps me view my patients with more compassion based on the child's background and up bringing</td>
<td>2/27/2016 9:32 AM</td>
</tr>
<tr>
<td>36</td>
<td>Better screening</td>
<td>2/26/2016 4:16 PM</td>
</tr>
<tr>
<td>37</td>
<td>I will give more consideration to the importance of environmental influences on brain development in evaluating children with developmental disabilities</td>
<td>2/26/2016 2:52 PM</td>
</tr>
<tr>
<td>38</td>
<td>I am not a medical professional, but think that the information gained at this conference could benefit the medical field in many ways!</td>
<td>2/26/2016 2:09 PM</td>
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Q5 Please let us know if today's event met the program objectives listed below: At the conclusion of this conference, were you able to: Improve your knowledge of early childhood adversity and its lifelong impact on a child's development, behavior and learning.

Answered: 67  Skipped: 0

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Total: 67
Q6 Improve your understanding of new thinking related to brain development and autism spectrum disorder including genetics and electrophysiology.

Answered: 66  Skipped: 1

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Q7 Understand new approaches to identifying and treating learning, attention and behavior disorders.

Answered: 66  Skipped: 1

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Q8 Understand research on a new intervention model for treating neonatal drug exposure and interventions to support families caring for children with disabilities.

Answered: 64  Skipped: 3

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Q9 Please evaluate the presenters and topics: 8:00-8:50 AM
The Impact of Early Life Experiences on Brain Development
Judy L. Cameron, PhD

Answered: 66  Skipped: 1

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<td>1.52%</td>
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Total 66

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<td>She is inspirational.</td>
<td>3/18/2016 2:18 PM</td>
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<td>2</td>
<td>Dynamic-interesting</td>
<td>3/8/2016 3:14 PM</td>
</tr>
<tr>
<td>3</td>
<td>Dr. Cameron was one of the best speakers we have had in ten years! She</td>
<td>3/1/2016 8:32 AM</td>
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<tr>
<td></td>
<td>was engaging and spoke about something that relevant and easily</td>
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</tr>
<tr>
<td></td>
<td>understandable to individuals representing a number of professions,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>not just physicians.</td>
<td></td>
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<tr>
<td>4</td>
<td>She was an excellent speaker with very creative and effective</td>
<td>2/29/2016 8:07 AM</td>
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<tr>
<td></td>
<td>visual supports. She made her points very clearly and used examples</td>
<td></td>
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<td></td>
<td>that were easy to understand.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Very clear</td>
<td>2/27/2016 5:48 PM</td>
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</table>

2-26-16 10th Annual Nurturing Developing Minds Conference
Q10 At the conclusion of the presentation were you able to: Demonstrate understanding of the environmental factors that influence brain development

Answered: 67  Skipped: 0

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Q11 Recognize the importance of supportive reciprocal relationships during early brain development

Answered: 67   Skipped: 0

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Q12 **Apply knowledge of brain development to interactions with young children**

Answered: 67  Skipped: 0

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Q13 9:00-9:50 AM Neurodiversity Manuel F. Casanova, MD

Answered: 67  Skipped: 0

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<td>Very Good</td>
<td>31.34%</td>
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<td>Good</td>
<td>23.88%</td>
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<td>Fair</td>
<td>19.40%</td>
</tr>
<tr>
<td>Poor</td>
<td>4.48%</td>
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<th>#</th>
<th>Comments</th>
<th>Date</th>
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<tr>
<td>1</td>
<td>Balanced presentation</td>
<td>3/25/2016 2:02 PM</td>
</tr>
<tr>
<td>2</td>
<td>Interesting topic</td>
<td>3/18/2016 2:18 PM</td>
</tr>
<tr>
<td>3</td>
<td>Interesting topic. Presentation style could be more engaging.</td>
<td>3/17/2016 1:53 PM</td>
</tr>
<tr>
<td>4</td>
<td>COULD NOT UNDERSTAND A WORD HE SAID</td>
<td>3/16/2016 10:35 AM</td>
</tr>
<tr>
<td>5</td>
<td>difficult to understand his speech</td>
<td>3/16/2016 9:13 AM</td>
</tr>
<tr>
<td>6</td>
<td>I had a very hard time understanding his content and due to no fault of</td>
<td>3/15/2016 1:46 PM</td>
</tr>
<tr>
<td></td>
<td>his own his accent was hard to hear especially since the power was out</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and no microphone was available</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Speaker was incredibly difficult to understand</td>
<td>3/15/2016 8:49 AM</td>
</tr>
<tr>
<td>8</td>
<td>Unfortunately he was up against technological adversity with the blown</td>
<td>3/8/2016 3:14 PM</td>
</tr>
<tr>
<td></td>
<td>transformer-microphone did not work. Very knowledgable, but was difficult</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to hear.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>was unable to clearly hear/understand speaker</td>
<td>3/4/2016 2:03 PM</td>
</tr>
<tr>
<td>10</td>
<td>could not hear anything due to broken sound system.</td>
<td>3/4/2016 1:32 PM</td>
</tr>
<tr>
<td>11</td>
<td>It was hard to hear the presenter and I feel I missed a lot of information.</td>
<td>3/1/2016 2:11 PM</td>
</tr>
<tr>
<td>No.</td>
<td>Comment</td>
<td>Date/Time</td>
</tr>
<tr>
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<td>------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>12</td>
<td>a lot of knowledge to absorb in a small amount of time</td>
<td>3/1/2016 1:45 PM</td>
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<tr>
<td>13</td>
<td>Too much topic content in such a short time frame allowed for the speaker. The content was good, but the main message could have condensed and relayed to the audience better.</td>
<td>2/29/2016 10:47 PM</td>
</tr>
<tr>
<td>14</td>
<td>Hard to understand due to accent and audio difficulties</td>
<td>2/29/2016 2:10 PM</td>
</tr>
<tr>
<td>15</td>
<td>Good content but difficult to hear.</td>
<td>2/29/2016 8:59 AM</td>
</tr>
<tr>
<td>16</td>
<td>Sometimes difficult to understand with the language barrier and tech issues that unfortunately arouse.</td>
<td>2/29/2016 7:13 AM</td>
</tr>
<tr>
<td>17</td>
<td>He was hard to follow, perhaps because I am a little hard of hearing and the microphone was turned low.</td>
<td>2/27/2016 5:48 PM</td>
</tr>
<tr>
<td>18</td>
<td>Difficult to hear speaker. Wish he would have skipped the historical background and gotten to the meat of the presentation since time was short</td>
<td>2/27/2016 10:40 AM</td>
</tr>
<tr>
<td>19</td>
<td>Difficult to hear and understand</td>
<td>2/27/2016 9:47 AM</td>
</tr>
<tr>
<td>20</td>
<td>Biggest drawback very very hard to understand his speech so I dis not understand the majority of his message</td>
<td>2/27/2016 9:38 AM</td>
</tr>
<tr>
<td>21</td>
<td>I had a hard time understanding this mans accent. I know he is brilliant so I feel terrible but because I couldn't understand him well I didn't get much from his talk</td>
<td>2/27/2016 9:34 AM</td>
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</table>
Q14 At the conclusion of the presentation were you able to: Discuss the aims of Neurodiversity either as an advocacy or civil rights movement.

Answered: 67  Skipped: 0

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Responses: 67
Q15 Demonstrate understanding of the factors that led to the Neurodiversity movement, e.g. anti-psychiatry movement.

Answered: 67  Skipped: 0

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<td>14.93%</td>
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Q16 Describe the controversies of the Neurodiversity movement in regards to research and treatment of disabled individuals.

Answered: 67   Skipped: 0

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Q17 Electrophysiology in Autism
Manuel F. Casanova, MA
Answered: 16  Skipped: 51

Answer Choices

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Total 16

# Comments                                  Date
1   COULD NOT UNDERSTAND A WORD HE SAID         3/16/2016 10:35 AM
2   Speaker difficult to understand             3/15/2016 8:50 AM
3   Did not do this break out                    3/5/2016 2:46 PM
4   Did not attend                               2/27/2016 5:49 PM
5   Again, too much historical info. Wish we could have gotten more about current literature and practice 2/27/2016 10:41 AM
6   didn't have much time to go over all this     2/26/2016 2:27 PM
Q18 At the conclusion of the presentation were you able to: Discuss the history of electrophysiological interventions in medicine.

Answered: 16  Skipped: 51

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Q19 Understand the significance of claims regarding transcranial direct stimulation (tDCS) in neurodevelopmental disorders.

Answered: 16  Skipped: 51

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Total 16
Q20 Describe new interventions such as transcranial magnetic stimulation in autism.

Answered: 15   Skipped: 52

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2-26-16 10th Annual Nurturing Developing Minds Conference
Q21 Eligibility for IDEA
Services: Understanding Diagnosis, Eligibility and IEP Development Decisions
Susan Kreh Beck, EdS, NCSP, LPES

Answered: 23  Skipped: 44

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<td>1</td>
<td>I am a medical provider - this was meant for those who already had an</td>
<td>3/16/2016 9:15 AM</td>
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<td>understanding or terms/lingo</td>
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<td>2</td>
<td>wish it had more... just the tip of the iceberg for understanding IDEA</td>
<td>2/29/2016 7:14 AM</td>
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<td>3</td>
<td>time period too brief to cover topic adequately</td>
<td>2/28/2016 12:23 PM</td>
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Q22 At the conclusion of the presentation were you able to: Describe the process of developing an individualize education plan.

Answered: 23  Skipped: 44

Answer Choices

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Q23 List the diagnostic measures used to establish eligibility for an IEP.

Answered: 23  Skipped: 44

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Total 23
Q24 Understand the factors considered to determine eligibility for an IEP.

Answered: 23  Skipped: 44

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Q25 Positive Behavior Support
David A. Rotholz, PhD

Answered: 33  Skipped: 34

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<td>6.06%</td>
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<td>Poor</td>
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<td>3/17/2016 1:55 PM</td>
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<td>Excellent, questions a great learning tool</td>
<td>3/16/2016 9:15 AM</td>
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<td>Did not do this breakout</td>
<td>3/5/2016 2:46 PM</td>
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<td>4</td>
<td>I thought it was a very helpful and informative presentation</td>
<td>2/29/2016 8:08 AM</td>
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<td>2/27/2016 5:49 PM</td>
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Q26 At the conclusion of the presentation were you able to: Describe the therapeutic principles and approaches incorporated in positive behavior support.

Answered: 33  Skipped: 34

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Q27 Recognize which patients would benefit from positive behavior support.

Answered: 32  Skipped: 35

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Q28 Discuss beneficial outcomes of positive behavior support.

Answered: 33  Skipped: 34

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Total 33
Q29 Genetics of Autism and Related Neurodevelopmental Disabilities: An Update

David B. Everman, MD

Answered: 29  Skipped: 38

Answer Choices

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Total 29

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<td>Superb! Analogies very helpful.</td>
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<td>3</td>
<td>A very difficult topic to present in a way for all to understand.</td>
<td>3/1/2016 2:14 PM</td>
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Q30 At the conclusion of the presentation were you able to: Describe the current understanding of the complex genetic causes of autism.

Answered: 29  Skipped: 38

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Q31 Understand the potential benefits as well as the potential unintended consequences of genetic testing in patients with autism.

Answered: 28  Skipped: 39

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Q32 Develop a plan for genetic testing in a patient with autism.

Answered: 29  Skipped: 38

Answer Choices

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Q33  ADHD Psychopharmacology
Update James H. Beard Jr., MD

Answered: 14   Skipped: 53

Answer Choices

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Total 14

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Q34 At the conclusion of the presentation were you able to: Describe new developments in the medical treatment of ADHD.

Answered: 14  Skipped: 53

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Q35 Understand the benefits and potential side effects of common medications used to treat ADHD.

Answered: 14  Skipped: 53

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Q36 Describe a treatment plan for a patient with ADHD and associated anxiety.

Answered: 14  Skipped: 53

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Q37 Parenting a Child with Disability: The Family Perspective (SC Lend Family Panel Discussion) Karen Y. Irick and Parent Panel SC LEND Program

Answered: 30  Skipped: 37

Answer Choices

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Total 30

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<td>Would have preferred more perspectives from the panel of parents. Facilitator tended to interject too much as she asked the questions.</td>
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<td>2</td>
<td>Powerful perspective</td>
<td>3/18/2016 2:19 PM</td>
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<td>3</td>
<td>was very good to hear from the family perspective</td>
<td>3/9/2016 1:53 PM</td>
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<td>4</td>
<td>Best session-revealed much from the parent perspective, and confirmed my suspicions that present ways of getting services for families are not the most effective, and much falls through the cracks.</td>
<td>3/8/2016 3:18 PM</td>
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<td>Excellent to hear the parents’ perspective. This was very helpful and the research was right there, spoken in our presence</td>
<td>3/4/2016 2:04 PM</td>
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<td>6</td>
<td>amazing families to allow us into their lives!</td>
<td>2/29/2016 7:15 AM</td>
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<td>7</td>
<td>very well spoken parents, obviously well informed advocates for their children.</td>
<td>2/28/2016 9:02 AM</td>
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<td>2/27/2016 5:50 PM</td>
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Q38 At the conclusion of the presentation were you able to: Communicate more effectively with the parents and caregivers of a child with a developmental disability

Answered: 29  Skipped: 38

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Total          | 29        |
**Q39** Discuss a family-centered approach to helping children with developmental disabilities and their families

Answered: 29   Skipped: 38

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Q40 Serving Children with Autism in South Carolina: An Update
Anne M. Kinsman, PhD

Answered: 20  Skipped: 47

Answer Choices

| Excellent | 60.00% | 12 |
| Very Good | 15.00% | 3  |
| Good      | 15.00% | 3  |
| Fair      | 10.00% | 2  |
| Poor      | 0.00%  | 0  |

Total 20

# Comments

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<td>time period too brief to appropriately address/cover topic</td>
<td>2/28/2016 12:24 PM</td>
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<td>3</td>
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<td>2/27/2016 5:51 PM</td>
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Q41 At the conclusion of the presentation were you able to: Recognize the importance of early identification and treatment for children with autism.

Answered: 19  Skipped: 48

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Q42  Described systems developed in South Carolina to promote early diagnosis and treatment for young children with autism.

Answered: 19   Skipped: 48

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Q43 Understand the resources available for treatment and support of children with autism and their families.

Answered: 19  Skipped: 48

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Total 19
Q44 An Update on Developmental Screening
Steven H. Ma, MD
Lorraine J. Craigan-Sullivan, MA, LMSW, NCC

Answered: 33  Skipped: 34

Answer Choices: Excellent, Very Good, Good, Fair, Poor

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Total: 33

# Comments                               Date
1  Did not do this breakout session.      3/5/2016 2:48 PM
2  I would have liked more information on all types of screening available to use.  3/1/2016 2:15 PM
3  Did not attend                       2/27/2016 5:51 PM
Q45 At the conclusion of the presentation were you able to: Understand the importance of screening for developmental and behavioral disorders.

Answered: 31  Skipped: 36

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Q46 Describe the most commonly used developmental screening instruments.

Answered: 33  Skipped: 34

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Total 33
Q47 List the national and local programs that promote developmental screening including Help Me Grow.

Answered: 33   Skipped: 34

**Answer Choices** | **Responses**
--- | ---
Yes | 84.85% 28
Somewhat | 15.15% 5
No | 0.00% 0
Total | 33
Q48 Preventing NAS in Opioid-dependent Newborns
Jennifer A. Hudson, MD

Answered: 14   Skipped: 53

Answer Choices

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Total 14

# Comments                                | Date                      |
---|---|
1  | Extremely pertinent to my job. Kudos to Dr. Hudson and her team for taking the initiative to positively impact outcomes for this fragile population. | 3/18/2016 2:20 PM |
2  | Would be interested in hypothetical risks and benefits of neonatal methadone treatment or animal models. | 3/17/2016 2:00 PM |
3  | Excellent content and presentation that hopefully this treatment will be implemented statewide, if not nationwide. | 2/29/2016 10:51 PM |
4  | Did not attend | 2/27/2016 5:51 PM |
5  | Really well put together presentation. Compelling data. I think the most interesting presentation of the day | 2/27/2016 10:42 AM |
Q49 At the conclusion of the presentation were you able to: Discuss the risks of physical and developmental problems in newborns who have been exposed to opioids.

Answered: 14    Skipped: 53

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Q50 Describe neonatal abstinence syndrome.

Answered: 14  Skipped: 53

Answer Choices

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Q51 Described a program that prevents neonatal abstinence syndrome in newborns who have been exposed to opioids.

Answered: 14  Skipped: 53

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Q52 Apps for Children with Communication Disorders
Carol A. Page, PhD, CCC-SLP, ATP

Answered: 26  Skipped: 41

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<tr>
<td>Very Good</td>
<td>26.92%</td>
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<tr>
<td>Good</td>
<td>30.77%</td>
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<tr>
<td>Fair</td>
<td>3.85%</td>
</tr>
<tr>
<td>Poor</td>
<td>0.00%</td>
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</table>

Total Responses: 26

# Comments
1. Good to hear ideas of beneficial features of some apps versus others.
   Date: 3/8/2016 3:20 PM
2. Did not do this breakout session
   Date: 3/5/2016 2:48 PM
3. Would have been helpful to actually see the apps
   Date: 3/4/2016 2:05 PM
4. Would have liked to walk away with a list of apps I could use with my special needs clients.
   Date: 3/1/2016 2:17 PM
5. Did not attend
   Date: 2/27/2016 5:51 PM
Q53 At the conclusion of the presentation were you able to: Recognize the challenges faced by individuals with communication disorders.

Answered: 26  Skipped: 41

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<td>23.08%</td>
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Total: 26
Q54 Describe technological interventions that support communication in individuals with language and communication disorders.

Answered: 26  Skipped: 41

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</table>
Q55 Demonstrate knowledge of resources available in South Carolina to assist individuals with communication disorders.

Answered: 26  Skipped: 41

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Q56 Addressing Learning Problems in Elementary School
Ellen M. Hampshire, MEd

Answered: 16    Skipped: 51

Answer Choices

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Responses

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Comments

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<td>Did not do this breakout session</td>
<td>3/5/2016 2:48 PM</td>
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<td>2</td>
<td>Did not attend</td>
<td>2/27/2016 5:51 PM</td>
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At the conclusion of the presentation were you able to: Recognize the challenges faced by elementary school age children with learning problems.

**Answer Choices**

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Q58 Describe programs in public elementary schools that assist students with learning problems.

Answered: 15  Skipped: 52

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Total 15
Q59 Understand the benefits and limitations of current systems to address learning problems in elementary school.

Answered: 15   Skipped: 52

Answer Choices

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Total 15

2-26-16 10th Annual Nurturing Developing Minds Conference
Q60 Supporting Patients and Families Through a Medical-legal Partnership
Nancy R. Powers, MD

Answered: 25  Skipped: 42

Answer Choices

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# Comments

1. Cannot wait for this program to be fully implemented. WOW  
   Date: 3/18/2016 2:22 PM

2. Would like more info on specific agencies involved in SC MLP.  
   Date: 2/29/2016 9:16 AM

3. Did not attend  
   Date: 2/27/2016 5:51 PM
Q61 At the conclusion of the presentation were you able to: Define vulnerable populations and health harming legal needs.

Answered: 26   Skipped: 41

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Q62 Understand the concept of a Medical-Legal Partnership (MLP).

Answered: 26  Skipped: 41

Answer Choices

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Q63 Recognize potential applications for MLP in patient care.

Answered: 26  Skipped: 41

Answer Choices

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Total 26
Q64 Please evaluate the presenters and topics:
3:15 - 4:00 PM
SC LEND Symposium
Desmond P. Kelly, MD
Michelle M. Macias, MD

Answered: 60  Skipped: 7

Answer Choices | Responses
---|---
Excellent | 38.33% 23
Very Good | 31.67% 19
Good | 23.33% 14
Fair | 5.00% 3
Poor | 1.67% 1
Total | 60

# | Comments | Date
---|---|---
1 | LEND affords an outstanding opportunity for participants to learn and develop skillsets in the field of neurodevelopmental disabilities | 3/18/2016 2:25 PM
2 | Very interesting projects. I am anxious to hear of the results. | 2/29/2016 8:11 AM
3 | Did not attend | 2/27/2016 5:52 PM
Q65 At the conclusion of the presentation were you able to: Describe the goals of the SC LEND program to develop inter-professional leaders in the field of neurodevelopmental disabilities.

Answered: 61  Skipped: 6

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Total 61
Q66 Discuss leadership projects being carried out by SC LEND trainees

Answered: 61  Skipped: 6

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</table>
Q67 Please evaluate the presenters and topics: 4:10 PM - 4:55 PM
When Loving Babies Is Not Enough: Implications from the Brain Science and Two-generation Frameworks for Our Work with Young Children
Janice M. Gruendel, PhD

Answered: 57  Skipped: 10

Answer Choices | Responses
--- | ---
Excellent | 68.42% 39
Very Good | 26.32% 15
Good | 3.51% 2
Fair | 1.75% 1
Poor | 0.00% 0
Total | 57

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<tr>
<td>1</td>
<td>Powerful presentation regarding nature vs. nurture.</td>
<td>3/18/2016 2:25 PM</td>
</tr>
<tr>
<td>2</td>
<td>Dynamite! Passion and experience.</td>
<td>3/17/2016 2:03 PM</td>
</tr>
<tr>
<td>3</td>
<td>Very dynamic and passionate about topic.</td>
<td>3/8/2016 3:22 PM</td>
</tr>
<tr>
<td>4</td>
<td>She is an excellent speaker and captivated the audience. She presented a very interesting idea and point of view.</td>
<td>2/29/2016 8:11 AM</td>
</tr>
<tr>
<td>5</td>
<td>Did not attend</td>
<td>2/27/2016 5:52 PM</td>
</tr>
<tr>
<td>6</td>
<td>Absolutely great</td>
<td>2/27/2016 9:42 AM</td>
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Q68 At the conclusion of the presentation were you able to: Describe the advances in understanding of brain function and influences on the brain development.

Answered: 57  Skipped: 10

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<tr>
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Total 57
Q69 Recognize the importance of assisting and supporting the parents as well as the child to promote healthy child development.

Answered: 56  Skipped: 11

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Q70 **Apply the knowledge of brain science in working with young children.**

Answered: 57  Skipped: 10

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<td>7.02%</td>
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Q71 Did you perceive any commercial bias in this program

Answered: 66  Skipped: 1

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If yes, in which presentation and what was the perceived bias?

There are no responses.
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<tbody>
<tr>
<td>1</td>
<td>I have attended this conference for the last three years and really enjoy it. I only wish it was 2 days. There are some many good topics in breakout sessions, I would like opportunity to attend more.</td>
<td>3/20/2016 9:25 AM</td>
</tr>
<tr>
<td>2</td>
<td>Attended last year when held at GMMC campus and no CME - was not well done. I gave it another chance this year. Excellent - place, speakers, topics. Great job, keep it up!</td>
<td>3/16/2016 9:23 AM</td>
</tr>
<tr>
<td>3</td>
<td>Very good, no changes</td>
<td>3/15/2016 8:52 AM</td>
</tr>
<tr>
<td>4</td>
<td>Would be helpful if you couldn't hear construction in the background.</td>
<td>3/8/2016 3:43 PM</td>
</tr>
<tr>
<td>5</td>
<td>The hotel setting was nice except frequent construction (?) noise such as banging.</td>
<td>3/8/2016 3:29 PM</td>
</tr>
<tr>
<td>6</td>
<td>I liked the current single day format.</td>
<td>3/5/2016 2:50 PM</td>
</tr>
<tr>
<td>7</td>
<td>None</td>
<td>3/3/2016 10:55 PM</td>
</tr>
<tr>
<td>8</td>
<td>Perhaps a more interactive presentation would be much more helpful in seeing how to implement the information within a practice.</td>
<td>3/1/2016 9:46 PM</td>
</tr>
<tr>
<td>9</td>
<td>Everything was excellent!</td>
<td>3/1/2016 4:13 PM</td>
</tr>
<tr>
<td>10</td>
<td>I like the time and place and would not change it. Was easy access to get to and park.</td>
<td>3/1/2016 2:19 PM</td>
</tr>
<tr>
<td>11</td>
<td>Location was GREAT, don't change. Parking was easy. Presentation location great.</td>
<td>3/1/2016 9:51 AM</td>
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<tr>
<td>12</td>
<td>Time and place were excellent. Unfortunately there was a power failure.</td>
<td>3/1/2016 8:49 AM</td>
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<td>13</td>
<td>Enjoyed the new location.</td>
<td>3/1/2016 8:34 AM</td>
</tr>
<tr>
<td>14</td>
<td>N/A</td>
<td>2/29/2016 8:13 AM</td>
</tr>
<tr>
<td>15</td>
<td>Good location- provided excellent services even with a major power outage!</td>
<td>2/29/2016 7:19 AM</td>
</tr>
<tr>
<td>16</td>
<td>facility needed more restrooms offered for ladies. otherwise facilities sufficient</td>
<td>2/28/2016 4:26 PM</td>
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**Q73 What would you like to see offered on the program for next year?**

Answered: 12  Skipped: 55

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<tr>
<td>1</td>
<td>Dr Casanova again, very interesting lecturer and topics. And again a second day of repeat breakouts, so you could attend more sessions.</td>
<td>3/20/2016 9:25 AM</td>
</tr>
<tr>
<td>2</td>
<td>Evidence based interventions for ACEs</td>
<td>3/17/2016 2:03 PM</td>
</tr>
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<td>3</td>
<td>yes</td>
<td>3/16/2016 3:01 PM</td>
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<tr>
<td>4</td>
<td>Adolescent mental health - depression, anxiety, cutting, pharm. Importance of medical providers and schools communicating.</td>
<td>3/16/2016 9:23 AM</td>
</tr>
<tr>
<td>5</td>
<td>Very good, no changes</td>
<td>3/15/2016 8:52 AM</td>
</tr>
<tr>
<td>6</td>
<td>common health &amp; mental health concerns in children w/Autism and management strategies (ie constipation, melt downs, anxiety)</td>
<td>3/11/2016 6:32 PM</td>
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<tr>
<td>7</td>
<td>Successful/current types of programs designed to work with children who have experienced toxic stress.</td>
<td>3/8/2016 3:29 PM</td>
</tr>
<tr>
<td>8</td>
<td>Similar program.</td>
<td>3/5/2016 2:50 PM</td>
</tr>
<tr>
<td>9</td>
<td>More breakout sessions pertaining to the nursing field and more special needs focus</td>
<td>3/4/2016 2:07 PM</td>
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<td>A family event</td>
<td>3/3/2016 10:55 PM</td>
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<tr>
<td>11</td>
<td>Not sure?</td>
<td>3/1/2016 9:51 AM</td>
</tr>
<tr>
<td>12</td>
<td>I would like to have at least one or two presentations addressing a variety of diagnoses and treatments. It would be interesting to have a therapy perspective included as well.</td>
<td>2/29/2016 8:13 AM</td>
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Q74 Does this CME activity meet the SC Board of Medical Examiners practice specialty requirement for your area of practice?

Answered: 66  Skipped: 1

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Q75 This event was eligible for a maximum of 420 Minutes. I attest that I attended this amount of time.

Answered: 66  Skipped: 1

### Answer Choices

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| 65| deverman@ggc.org                      | 2/26/2016 10th Annual Nurturing Developing Minds Conference
May 2016  CME Committee Meeting item.

Sally Thorpe-Cade | CME Coordinator
Greenville Health System | Continuing Medical Education
701 Grove Road  HSA Building Suite 232
Greenville, SC 29605
Office: (864) 455-3552 | Fax: (864) 455-3587
scade@ghs.org | www.university.ghs.org/CME

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From: Robin N. LaCroix, M.D.
Sent: Wednesday, March 23, 2016 3:43 PM
To: Sally Kay Thorpe-Cade
Subject: RE: Pediatric Quality M&M

Yes that is the case. Thanks for your help

Robin N. LaCroix, M.D.
Vice Chair of Quality & Medical Staff Affairs
Department of Pediatrics
Greenville Health Systems
701 Grove Road
Greenville, SC 29605
Phone: 864-455-3512
Fax: 864-455-3884
Email: RLaCroix@ghs.org

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From: Sally Kay Thorpe-Cade
Sent: Wednesday, March 23, 2016 11:49 AM
To: Robin N. LaCroix, M.D.
Subject: RE: Pediatric Quality M&M
Importance: High

So that I am clear and can take to the committee. For Pediatric Quality M&M you will need a total of 12.00 AMA PRA Category 1 Credits™ for the year. Thank you.

ASly

Sally Thorpe-Cade | CME Coordinator
Greenville Health System | Continuing Medical Education
701 Grove Road  HSA Building Suite 232
Greenville, SC 29605
Hi Sally,

We are required to have 12 per year. We have 4 that are perinatal Feb, May, Aug and Nov and the rest are general Pediatric. Sorry if there was confusion. We may have cancelled in the past or the schedule may have been affected by switching from Linc to Skype.

Let me know if we need to do anything else with this.

Robin

Robin N. LaCroix, M.D.
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