SCORE for General Surgery Residents: Pearls for Implementation

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Thoracic Surgery Directors Association
General Session
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What is SCORE?

• Consortium of seven major US-based surgical organizations

• Consortium collaborated to develop curriculum for surgical training
  – Developed over past 8 years
  – Currently delivered via web-based portal
SCORE History

- **2004**: SCORE consortium forms
- **2005**: Iterative process to develop curriculum outline
- **2006-2008**: Web portal improvements
- **Late 2008**: Beta testing of web portal
- **2008-2009**: Subscription only resource; 214/245 programs (~85% of residents)
- **July 1, 2010**: Dick Bell joined ABS to oversee curriculum development

Dick Bell joins ABS to oversee curriculum development
SCORE

• SCORE web portal
  – Unified curriculum
  – Specific learning objectives
  – Curriculum revised and updated annually
  – Mobile accessible, easily searchable

www.surgicalcore.org
## Current subscription status

<table>
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<tr>
<th>As of December 2013:</th>
<th>Programs</th>
<th>Residents</th>
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<tbody>
<tr>
<td>US allopathic</td>
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<td>9019</td>
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<tr>
<td>Osteopathic</td>
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<tr>
<td>International</td>
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<td>Cardiothoracic</td>
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<td>6</td>
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<tr>
<td>CT and OMFS</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>307</td>
<td>9717</td>
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</table>
How programs are using SCORE

• Curriculum and “point of care” learning
  – Conceived as tool to support the core/required learning curriculum in residency
  – Increasingly used by residents for “on the fly” learning (before cases, in evaluating a consult, etc)

• Fulfill competency area requirements
  – Systems based practice
  – Professionalism, communication skills
Curriculum Areas

Patient Care: 28 categories, 690 topics total

• Diseases/Conditions
  – Broad (n = 203)
  – Focused (n = 204)

• Operations/Procedures
  – Essential-common (n = 76)
  – Essential-uncommon (n=63)
  – Complex (n = 144)

Medical Knowledge: 13 categories, 78 topics

Curriculum is reviewed and modified annually
Diseases and Conditions

• **Broad**: graduate should be able to care for all aspects of disease and provide comprehensive management

• **Focused**: graduate should be able to make diagnosis, provide initial management/stabilization, but not expected to provide comprehensive care
Operations/procedures

- **Essential-common**: frequently performed in general surgery; specific competency required by graduates (with case volume present during training)

- **Essential-uncommon**: rare, often urgent operations seen in gen surg practice but not typically done in significant numbers by trainees; specific competency required by graduates (but not obtained by training case volume alone)

- **Complex**: not consistently performed by general surgeons in training or practice. Some residency programs may provide sufficient experience for competency by graduates
Relationship between SCORE and ABS exams

• Content outline for ABS exams now mapped to SCORE
• Areas of relative complexity are weighted appropriately
• Curriculum outline has helped focus exams
• No content in SCORE is on exams and vice versa
  – Firewall between these entities
  – Curriculum outline publically available
Modules

- Each topic is organized into a module
- Defined learning objectives
- Open ended questions
  - Self study for resident
  - Lead point for discussion for faculty leaders
- Licensed textbook chapters
- Videos
Current publisher content

- ACS Surgery: Principles & Practice
- Greenfield's Surgery: Scientific Principles & Practice
- Fischer's Mastery of Surgery
- Cameron's Atlas of Gastrointestinal Surgery
- Norton’s Basic Science and Clinical Surgery
- O’Leary’s Physiologic Basis of Surgery
- Evan’s Surgical Pitfalls
- Coran’s Pediatric Surgery
- Ethics and Palliative care textbooks from ACS

- ACS Surgery Weekly Curriculum
- Evidence Based Reviews in Surgery
- Annals of Surgery Journal Club
- COACH
- STATdx® library of radiologic and anatomic images
- Video library
How residency programs use SCORE

- Weekly curriculum/didactic conferences
- Deep dive independent learning (outside of conference topics)
- Preparation for In-Training exam
- “Point of care” learning to aid in patient management
How residency programs use SCORE

• Support weekly didactic conference
  – Use internally developed sequence of topics
    • Assign via SCORE assignment feature or in-house notification system
  – Use ACS Surgery Weekly Curriculum sequence of topics
  – Module assignments, defined learning objectives, textbook reading/video viewing as “homework”
  – In conference discussion of learning objectives and open ended questions
How residency programs use SCORE

• Deep dive independent learning (outside of conference topics)
  – Read textbooks, review learning objectives in modules
• Preparation for In-Training exam
  – Self assessment question feature
• “Point of care” learning to aid in patient management
  – Search terms
Other features: resident-centric

• Self assessment, multiple choice questions
  – ~3000 total
  – Sources: retired ABSITE questions (with explanations), licensed from textbook publishers, older edition SESAP questions, peer review authored

• Supplemental resources
Supplemental Resources

SCORE encourages use of these curricular and media resources to augment your surgical educational experience.

STATdx provides an extensive collection of anatomy imaging as well as evidence based diagnoses and differential diagnoses. STATdx is provided by SCORE partner Amirsys, Inc.

Curriculum Tools

The ACS Surgery Weekly Curriculum is a convenient program that guides residents through an ongoing study of the key elements of general surgery from ACS Surgery: Principles and Practice. Each week's topics include a 4 or 5 question quiz, complete with immediate feedback.

The ASTS Academic Universe and the Transplant Curriculum for Surgery Residents is designed specifically for surgical residents during their rotation in transplant surgery. The modules cover key objectives in Abdominal Transplantation and offer a better understanding of topics such as immunobiology, immunosuppression, organ procurement and transplantation.

Journal Clubs

Evidence Based Reviews in Surgery offers a set of clinical and methodological reviews can be accessed each month. EBRs is provided courtesy of the Canadian Association of General Surgeons.

The Annals of Surgery Journal Club is an interactive resource for surgery residents and surgeons to discuss and critically evaluate articles published in Annals of Surgery and selected by a monthly guest expert.

COACH is an on-line multimedia educational tool based on pre-training (providing users with training videos, articles, and simulations prior to being exposed to real-life situations). COACH is operated by the Columbia University Medical Center.
Other features: faculty centric

• Assignments
• Reports
• Suggested curriculum sequence
  – By PGY year
  – Sequence for each academic year
• Material for competency areas
  – Journal clubs
  – Systems based practice
  – Professionalism/ethics/communication
Subscription pricing

• Per program fee, per year
  – $500
  – Includes PD, coordinator and 10 faculty

• Per resident fee
  – $125 per resident per year
  – Increasing to $145 for 2014-15

• All others are $295 per year
  – Not currently offering individual subscriptions
SCORE oversight

- **SCORE executive leadership group**
  - Frank Lewis, Mark Malangoni (ABS executive and associate executive directors)
  - Mark Hickey (IT lead, SCORE COO)
  - Mary Klingensmith (SCORE surgeon lead)

- **SCORE Council**
  - Seven member organizations
    - APDS, ASE, ACS, ASA, ACGME, RRC, SAGES, ACS-RAS
  - Twice yearly meetings for six years, now annual
SCORE oversight

• SCORE Editorial Board
  – 8 member group, broad specialty representation
  – Responsible for peer review and updates of all material
  – Oversight, new directions, interface with constituent groups
  – In person meetings 2-3 times per year

• Resident Advisory Group
  – 8 residents, broad representation of type, location and size of residency
  – Provides frequent input on navigation, features, new directions
  – Aids in updating/authoring content
  – In person meetings 1-2 times per year
SCORE finances

• Vast majority of funding to date has come from ABS reserves
  – Roughly $1.5 million per year, net of other contributions from 2006-2012

• Other contributors
  – American Surgical Association
  – Association of Program Directors in Surgery
  – American College of Surgeons

• Currently self sufficient based on subscription revenues of almost $1 mil
SCORE expenses

• Salaries for two full time employees
• Web hosting, web development
• Licensing agreements
  – Publishers
  – Stat Dx
  – COACH

• All content development/review is done gratis
• All videos and journal clubs free external links
Future Directions for SCORE

• SCORE 2.0
  – Launched March 2013
  – Semantic searches, better mobile interface
  – Responsive design in near future

• All competency areas
  – Professionalism, Communication, Practice-based learning and improvement

• ~65 additional modules
  – focused and complex diseases and operations/procedures
  – Complete June 2014

• New feature to navigate through all content in 2 years
Future Directions

• Apps, better mobile accessibility

• New anatomical and surgical atlases
  – Radiology curriculum

• Expansion
  – Fellowships (pediatric surgery, vascular, surgical oncology)
  – Medical students
  – Surgeons in practice (CME/MOC)

• Assessment
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