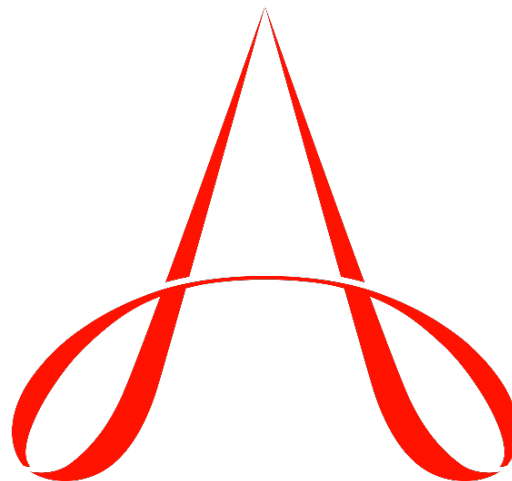




# Surgical Critical Care Milestones

The Accreditation Council for Graduate Medical Education



ACGME

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Second Revision: May 2021  
First Revision: February 2014

# Surgical Critical Care Milestones

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited residency or fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competence in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competence, nor are they designed to be relevant in any other context.

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American Board of Surgery

Review Committee for Surgery

Surgical Critical Care Program Directors Society

## Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of fellow performance, and then report to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME Competencies organized in a developmental framework. The narrative descriptions are targets for resident/fellow performance throughout their educational program.

Milestones are arranged into levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert fellow in the specialty or subspecialty. For each reporting period, the Clinical Competency Committee will review the completed evaluations to select the milestone levels that best describe each learner's current performance, abilities, and attributes for each subcompetency.

These levels *do not* correspond with post-graduate year of education. Depending on previous experience, a junior fellow may achieve higher levels early in his/her educational program just as a senior fellow may be at a lower level later in his/her educational program. There is no predetermined timing for a resident to attain any particular level. Fellows may also regress in achievement of their milestones. This may happen for many reasons, such as over scoring in a previous review, a disjointed experience in a particular procedure, or a significant act by the fellow.

Selection of a level implies the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page vi).

## Additional Notes

Level 4 is designed as a graduation *goal* but *does not* represent a graduation *requirement*. Making decisions about readiness for graduation and unsupervised practice is the purview of the program director. Furthermore, Milestones 2.0 include revisions and changes that preclude using Milestones as a sole assessment in high-stakes decisions (i.e., determination of eligibility for certification or credentialing). Level 5 is designed to represent an expert fellow whose achievements in a subcompetency are greater than the expectation. Milestones are primarily designed for formative, developmental purposes to support continuous quality improvement for individual learners, education programs, and the specialty. The ACGME and its partners will continue to evaluate and perform research on the Milestones to assess their impact and value.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to ACGME supervision guidelines as described in the Program Requirements, as well as to institutional and program policies. For example, a fellow who performs a procedure independently must, at a minimum, be supervised through oversight.

A Supplemental Guide is also available to provide the intent of each subcompetency, examples for each level, assessment methods or tools, and other available resources. The Supplemental Guide, like examples contained within the Milestones, is designed only to assist the program director and Clinical Competency Committee, and is not meant to demonstrate any required element or outcome.

Supplemental Guides and other resources are available on the Milestones page of each specialty section of the ACGME website. On [www.acgme.org](http://www.acgme.org), choose the applicable specialty under the “Specialties” menu, then select the “Milestones” link in the lower navigation bar.

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a fellow's performance on the milestones for each subcompetency will be indicated by selecting the level of milestones that best describes that fellow's performance in relation to those milestones.

| Systems-Based Practice 2: System Navigation for Patient-Centered Care                                |                                                                                          |                                                                                                 |                                                                                               |                                                                               |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Level 1                                                                                              | Level 2                                                                                  | Level 3                                                                                         | Level 4                                                                                       | Level 5                                                                       |
| Demonstrates knowledge of indications and resources for care coordination                            | Coordinates multidisciplinary care of patients in routine critical care situations       | Coordinates and/or leads multidisciplinary care of patients in complex critical care situations | Coordinates care of patients with barriers to health care access or other disparities in care | Leads the design and implementation of improvements to care coordination      |
| Performs safe and effective transitions of care/hand-offs in routine clinical situations             | Performs safe and effective transitions of care/hand-offs in complex clinical situations | Supervises safe and effective transitions of care/hand-offs of junior residents                 | Resolves conflicts in transitions of care between teams                                       | Leads in the design and implementation of improvements to transitions of care |
| <input type="checkbox"/>                                                                             | <input type="checkbox"/>                                                                 | <input type="checkbox"/>                                                                        | <input type="checkbox"/>                                                                      | <input type="checkbox"/>                                                      |
| <b>Comments:</b> <div style="float: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                          |                                                                                                 |                                                                                               |                                                                               |

Selecting a response box in the middle of a level implies that milestones in that level and in lower levels have been substantially demonstrated.

Selecting a response box on the line in between levels indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher level(s).

| Patient Care 1: Respiratory Failure                                                                                                                                              |                                           |                                                                                                            |                                                                                                          |                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                   | Level 3                                                                                                    | Level 4                                                                                                  | Level 5                                                                                                                                      |
| Requires direct supervision in basic management of patients with respiratory failure                                                                                             | Manages patients with respiratory failure | Recognizes the need for and initiates advanced ventilator techniques for patients with respiratory failure | Independently manages patients with respiratory failure, including use of advanced ventilator techniques | Is recognized as a resource or completes a quality improvement or research project regarding management of patients with respiratory failure |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                  | <input type="checkbox"/>                                                                                   | <input type="checkbox"/>                                                                                 | <input type="checkbox"/>                                                                                                                     |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                           |                                                                                                            |                                                                                                          |                                                                                                                                              |

| Patient Care 2: Nutritional Support                                                                                                                                              |                                                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                                             |                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                                                                 | Level 3                                                                                                             | Level 4                                                                                                                                                                                                                                                                     | Level 5                                                                                                                                             |
| Requires direct supervision in assessment and initial management of nutritional support in critically ill patients                                                               | Recognizes the need for nutritional support in critically ill patients but still requires indirect supervision in the assessment and initial management | Independently performs assessment of nutritional needs and initiates nutritional support in critically ill patients | Independently performs nutritional assessment and manages nutritional support for special populations of critically ill patients, including traumatic brain injury, immunodeficient, extracorporeal membrane oxygenation (ECMO), complex gastrointestinal surgical patients | Is recognized as a resource or completes a quality improvement or research project in nutritional assessment and support of critically ill patients |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                                                | <input type="checkbox"/>                                                                                            | <input type="checkbox"/>                                                                                                                                                                                                                                                    | <input type="checkbox"/>                                                                                                                            |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                                                         |                                                                                                                     |                                                                                                                                                                                                                                                                             |                                                                                                                                                     |



| Patient Care 3: Shock/Resuscitation                                                                                                                                              |                                                                                                                                                       |                                                                                                                                  |                                                                                                                              |                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                                                               | Level 3                                                                                                                          | Level 4                                                                                                                      | Level 5                                                                                                                           |
| Independently recognizes shock and initiates indicated resuscitation in critically ill patients                                                                                  | Individualizes resuscitation based on the type of shock and assessment of the response to therapy, and employs monitoring for critically ill patients | Employs advanced monitoring techniques to guide resuscitation for critically ill patients, including special patient populations | Performs complex resuscitation, including use of advanced monitoring techniques, particularly in special patient populations | Is recognized as a resource or completes a quality improvement or research project or develops a protocol for shock resuscitation |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                                              | <input type="checkbox"/>                                                                                                         | <input type="checkbox"/>                                                                                                     | <input type="checkbox"/>                                                                                                          |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                                                       |                                                                                                                                  |                                                                                                                              |                                                                                                                                   |

| Patient Care 4: Renal Disorders of Critically Ill Patients                                                                                                                       |                                                                    |                                                       |                                                                                                                                          |                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                            | Level 3                                               | Level 4                                                                                                                                  | Level 5                                                                                                                                    |
| Recognizes and categorizes patients with renal disorders                                                                                                                         | Initiates treatment of renal disorders based on stage and etiology | Directs management and assesses response to treatment | Provides comprehensive management of patients with renal disorders, including management of patients requiring renal replacement therapy | Recognized by peers as a resource, completes quality improvement or research project regarding management of patients with renal disorders |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                           | <input type="checkbox"/>                              | <input type="checkbox"/>                                                                                                                 | <input type="checkbox"/>                                                                                                                   |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                    |                                                       |                                                                                                                                          |                                                                                                                                            |

| Patient Care 5: Trauma and Thermal Injury                                                                                                                                        |                                                                                                          |                                                                                                                                                 |                                                                                                                                                                                                            |                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                  | Level 3                                                                                                                                         | Level 4                                                                                                                                                                                                    | Level 5                                                                                                                                                                                                |
| With direct supervision, initiates appropriate management of the critically injured patient                                                                                      | With indirect supervision, assesses critically injured patients and prioritizes and initiates management | Independently assesses and manages critically injured patients and prioritizes management in the treatment of common injuries and complications | Independently assesses and manages critically injured patients, including treatment of complex injuries and complications through initial evaluation and into the operating room/intensive care unit (ICU) | Is recognized as a resource in the assessment and management of critically injured patients or completes a quality improvement or research project regarding management of critically injured patients |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                 | <input type="checkbox"/>                                                                                                                        | <input type="checkbox"/>                                                                                                                                                                                   | <input type="checkbox"/>                                                                                                                                                                               |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                          |                                                                                                                                                 |                                                                                                                                                                                                            |                                                                                                                                                                                                        |

| Patient Care 6: Cardiovascular Disorders of Critically Ill Patients                                                                                                              |                                                                                                                              |                                                                                                          |                                                                                                                              |                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                                      | Level 3                                                                                                  | Level 4                                                                                                                      | Level 5                                                                                                                                                          |
| Requires direct supervision in the assessment and initial management of common cardiovascular disorders in critically ill patients                                               | Requires indirect supervision in the assessment and management of common cardiovascular disorders in critically ill patients | Independently performs assessment and manages common cardiovascular disorders in critically ill patients | Independently diagnoses and provides comprehensive management of complex cardiovascular disorders in critically ill patients | Is recognized as a resource or completes a quality improvement or research project regarding management of critically ill patients with cardiovascular disorders |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                     | <input type="checkbox"/>                                                                                 | <input type="checkbox"/>                                                                                                     | <input type="checkbox"/>                                                                                                                                         |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                              |                                                                                                          |                                                                                                                              |                                                                                                                                                                  |

| Patient Care 7: Neurologic Disorders of Critically Ill Patients                                                                                                                  |                                                                                                                          |                                                                                                            |                                                                                                                      |                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                                  | Level 3                                                                                                    | Level 4                                                                                                              | Level 5                                                                                                                                                                           |
| Requires direct supervision to recognize the stages and treatment of coma, delirium, seizures, and other neurologic disorders                                                    | Requires indirect supervision to assess and treat patients with coma, delirium, seizures, and other neurologic disorders | Independently recognizes and manages multiple etiologies of coma, delirium, and other neurologic disorders | Provides comprehensive management of multiple etiologies of coma, delirium, seizures, and other neurologic disorders | Is recognized as a resource or completes a quality improvement or research project regarding management of patients with coma, delirium, seizures, and other neurologic disorders |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                 | <input type="checkbox"/>                                                                                   | <input type="checkbox"/>                                                                                             | <input type="checkbox"/>                                                                                                                                                          |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                          |                                                                                                            |                                                                                                                      |                                                                                                                                                                                   |

| Patient Care 8: Gastrointestinal (GI) Disorders of Critically Ill Patients                                                                                                       |                                                                         |                                                        |                                                         |                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                 | Level 3                                                | Level 4                                                 | Level 5                                                                                                                                     |
| Requires direct supervision to diagnose and manage acute GI disorders                                                                                                            | Requires indirect supervision to diagnose and manage acute GI disorders | Independently diagnoses and manages acute GI disorders | Provides comprehensive management of acute GI disorders | Is recognized as a resource or completes a quality improvement or research project regarding management of patients with acute GI disorders |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                | <input type="checkbox"/>                               | <input type="checkbox"/>                                | <input type="checkbox"/>                                                                                                                    |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                         |                                                        |                                                         |                                                                                                                                             |

| Patient Care 9: Infectious Diseases of Critically Ill Surgical Patients                                                                                                          |                                                                                                                                          |                                                                                                                                        |                                                                                                                                                               |                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                                                  | Level 3                                                                                                                                | Level 4                                                                                                                                                       | Level 5                                                                                                                                      |
| Requires direct supervision to diagnose common infections and infectious complications (e.g. pneumonia, bacteremia)                                                              | Demonstrates the ability to diagnose and initiate management for frequently encountered infectious diseases and infectious complications | Diagnoses and manages atypical infectious diseases and infectious complications and demonstrates appropriate antimicrobial stewardship | Provides comprehensive management (prevention, diagnosis, and treatment) of infectious diseases, infectious complications, and multi-drug resistant organisms | Is recognized by peers as a resource or completes quality improvement or research project regarding management of an infectious complication |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                                 | <input type="checkbox"/>                                                                                                               | <input type="checkbox"/>                                                                                                                                      | <input type="checkbox"/>                                                                                                                     |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                                          |                                                                                                                                        |                                                                                                                                                               |                                                                                                                                              |

| Patient Care 10: Procedural Competence                                                                                                                                           |                                                                                                                      |                                                                                                                                                                                   |                                                                                                                                                           |                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                              | Level 3                                                                                                                                                                           | Level 4                                                                                                                                                   | Level 5                                                                                                                               |
| Requires direct supervision to perform common ICU procedures (e.g., peripheral arterial or central venous catheterization) and recognize complications                           | Independently performs routine ICU procedures<br><br>Recognizes and manages straightforward procedural complications | Performs routine ICU procedures in patients at high risk for procedural complications<br><br>Assesses patients at high risk for procedural complications and describes management | Performs specialized ICU procedures (e.g., transvenous pacing, inferior vena cava filter placement)<br><br>Independently manages procedural complications | Independently performs advanced ICU procedures (e.g., ECMO, intra-aortic balloon pump), and appropriately manages their complications |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                             | <input type="checkbox"/>                                                                                                                                                          | <input type="checkbox"/>                                                                                                                                  | <input type="checkbox"/>                                                                                                              |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                      |                                                                                                                                                                                   |                                                                                                                                                           |                                                                                                                                       |



| Medical Knowledge 1: Pathophysiology, Pharmacology, and Therapeutics in Critical Care                                                                                            |                                                                                                                              |                                                                                                                                         |                                                                                                                                          |                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                                      | Level 3                                                                                                                                 | Level 4                                                                                                                                  | Level 5                                                                                                                                                               |
| Demonstrates knowledge of pathophysiology, pharmacology, therapeutics, and complications of common critical care conditions                                                      | Demonstrates knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions | Synthesizes and applies knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions | Serves as a resource for knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions | Advances knowledge of pathophysiology, pharmacology, therapeutics, and complications of complex critical care conditions                                              |
| Synthesizes and prioritizes differential diagnosis for common critical care conditions, with indirect supervision                                                                | Synthesizes and prioritizes differential diagnosis for common critical care conditions                                       | Independently synthesizes and prioritizes differential diagnosis for complex critical care conditions                                   | Synthesizes and prioritizes differential diagnosis and anticipates potential complications for complex critical care conditions          | Is recognized by peers as an expert in synthesizing and prioritizing differential diagnosis complex critical care conditions and anticipating potential complications |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                     | <input type="checkbox"/>                                                                                                                | <input type="checkbox"/>                                                                                                                 | <input type="checkbox"/>                                                                                                                                              |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                              |                                                                                                                                         |                                                                                                                                          |                                                                                                                                                                       |

| Medical Knowledge 2: Prognosis in Critical Care Conditions                                                                                                                       |                                                                                                                 |                                                                                                                                                |                                                                                                                                  |                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                                                                         | Level 3                                                                                                                                        | Level 4                                                                                                                          | Level 5                                                                                            |
| Recognizes clinical course, including prognosis, of common critical care conditions                                                                                              | Identifies clinical course for patients with complex critical care conditions, including prognostic uncertainty | Formulates anticipated clinical course for patients with complex critical care conditions by integrating prognostic factors, tools, and models | Facilitates consensus of prognosis for patients with complex critical care conditions in collaboration with other care providers | Advances knowledge of application of tools for prognostication in complex critical care conditions |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                        | <input type="checkbox"/>                                                                                                                       | <input type="checkbox"/>                                                                                                         | <input type="checkbox"/>                                                                           |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                                                                                 |                                                                                                                                                |                                                                                                                                  |                                                                                                    |

| Medical Knowledge 3: Clinical Reasoning in Critical Care                                                                                                                         |                                                              |                                                                                                |                                                                                                |                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                          | Level 2                                                      | Level 3                                                                                        | Level 4                                                                                        | Level 5                                                                                                 |
| Demonstrates sound clinical reasoning in common critical care problems                                                                                                           | Identifies errors in clinical reasoning within critical care | Applies clinical reasoning principles to direct patient care in complex critical care problems | Reviews the clinical decision-making of oneself and the team to identify areas for improvement | Coaches and mentors others in clinical reasoning and helps them to recognize and avoid cognitive errors |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                     | <input type="checkbox"/>                                                                       | <input type="checkbox"/>                                                                       | <input type="checkbox"/>                                                                                |
| <b>Comments:</b> <div style="text-align: right;">           Not Yet Completed Level 1 <input type="checkbox"/><br/>           Not Yet Assessable <input type="checkbox"/> </div> |                                                              |                                                                                                |                                                                                                |                                                                                                         |

| Systems-Based Practice 1: Patient Safety and Quality Improvement                                          |                                                                                                  |                                                                                                          |                                                                                                             |                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                                          | Level 3                                                                                                  | Level 4                                                                                                     | Level 5                                                                                                   |
| Demonstrates knowledge of common patient safety events                                                    | Identifies system factors that lead to patient safety events                                     | Participates in analysis of patient safety events (simulated or actual)                                  | Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)     | Actively engages teams and processes to modify systems to prevent patient safety events                   |
| Demonstrates knowledge of how to report patient safety events                                             | Reports patient safety events through institutional reporting systems (simulated or actual)      | Participates in disclosure of patient safety events to patients and their families (simulated or actual) | Discloses patient safety events to patients and their families (simulated or actual)                        | Mentors others in the disclosure of patient safety events                                                 |
| Demonstrates knowledge of basic quality improvement methodologies and metrics                             | Describes local quality improvement initiatives (e.g., infection rate, hand hygiene, opioid use) | Participates in local quality improvement initiatives                                                    | Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project | Creates, implements, and assesses quality improvement initiatives at the institutional or community level |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                                         | <input type="checkbox"/>                                                                                 | <input type="checkbox"/>                                                                                    | <input type="checkbox"/>                                                                                  |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                                  |                                                                                                          |                                                                                                             |                                                                                                           |

| Systems-Based Practice 2: System Navigation for Patient-Centered Care                                     |                                                                                          |                                                                                                 |                                                                                          |                                                                               |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                                  | Level 3                                                                                         | Level 4                                                                                  | Level 5                                                                       |
| Demonstrates knowledge of indications and resources for care coordination                                 | Coordinates multidisciplinary care of patients in routine critical care situations       | Coordinates and/or leads multidisciplinary care of patients in complex critical care situations | Coordinates care of patients with limits to health care access or other barriers to care | Leads the design and implementation of improvements to care coordination      |
| Performs safe and effective transitions of care/hand-offs in routine clinical situations                  | Performs safe and effective transitions of care/hand-offs in complex clinical situations | Supervises safe and effective transitions of care/hand-offs of junior residents                 | Resolves conflicts in transitions of care between teams                                  | Leads in the design and implementation of improvements to transitions of care |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                                 | <input type="checkbox"/>                                                                        | <input type="checkbox"/>                                                                 | <input type="checkbox"/>                                                      |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                          |                                                                                                 |                                                                                          |                                                                               |

| Systems-Based Practice 3: Community and Population Health                                                 |                                                                                      |                                                                                          |                                                                                                 |                                                                                                 |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                              | Level 3                                                                                  | Level 4                                                                                         | Level 5                                                                                         |
| Demonstrates knowledge of population and community health needs                                           | Identifies specific population and community health needs for their local population | Uses local resources effectively to meet the needs of a patient population and community | Participates in changing and adapting practice to provide for the needs of specific populations | Leads innovations and advocates for populations and communities with specific health care needs |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                             | <input type="checkbox"/>                                                                 | <input type="checkbox"/>                                                                        | <input type="checkbox"/>                                                                        |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                      |                                                                                          |                                                                                                 |                                                                                                 |

| Systems-Based Practice 4: Physician Role in Health Care Systems                                                                         |                                                                                                                            |                                                                                                    |                                                                                                   |                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                 | Level 2                                                                                                                    | Level 3                                                                                            | Level 4                                                                                           | Level 5                                                                                               |
| Describes basic health payment systems, including government, private, public, and uninsured care, as well as different practice models | Describes how working within the health care system impacts patient care                                                   | Analyzes how personal practice affects the system                                                  | Uses shared decision making in patient care, taking into consideration patient risks and benefits | Advocates or leads change to enhance systems for high-value, efficient, and effective patient care    |
| Describes and identifies administrative roles in a surgical critical care unit                                                          | Identifies the key components and responsibilities of an ICU director for administration for a surgical critical care unit | Demonstrates knowledge of administrative leadership activities for the surgical critical care unit | Participates in key activities of administrative leadership for surgical critical care unit       | Demonstrates proficiency in administrative leadership, including knowledge of regulatory requirements |
| <input type="checkbox"/>                                                                                                                | <input type="checkbox"/>                                                                                                   | <input type="checkbox"/>                                                                           | <input type="checkbox"/>                                                                          | <input type="checkbox"/>                                                                              |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>                               |                                                                                                                            |                                                                                                    |                                                                                                   |                                                                                                       |

| Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice                                                                |                                                                                                                                                                       |                                                                                                                                                     |                                                                                                                                                |                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                        | Level 2                                                                                                                                                               | Level 3                                                                                                                                             | Level 4                                                                                                                                        | Level 5                                                                                                                                                                       |
| Demonstrates how to access and use available evidence, and incorporate patient preferences and values into the care of critically ill patients | Articulates clinical questions and uses scientific literature, guidelines, and algorithms integrated with patient preference to guide care of critically ill patients | Locates and applies the best available evidence, integrated with patient preference, to the care of critically ill patients with complex conditions | Critically appraises and applies evidence, even in the face of uncertain and/or conflicting evidence, to guide care of critically ill patients | Coaches others to critically appraise and apply evidence to the care of critically ill patients with complex conditions, and/or participates in the development of guidelines |
| <input type="checkbox"/>                                                                                                                       | <input type="checkbox"/>                                                                                                                                              | <input type="checkbox"/>                                                                                                                            | <input type="checkbox"/>                                                                                                                       | <input type="checkbox"/>                                                                                                                                                      |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>                                      |                                                                                                                                                                       |                                                                                                                                                     |                                                                                                                                                |                                                                                                                                                                               |



| Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth          |                                                                               |                                                                                            |                                                                     |                                                                   |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                       | Level 3                                                                                    | Level 4                                                             | Level 5                                                           |
| Establishes goals for personal and professional development                                               | Identifies opportunities for performance improvement; designs a learning plan | Integrates performance feedback and practice data to develop and implement a learning plan | Revises learning plan for personal growth based on performance data | Coaches others in the design and implementation of learning plans |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                      | <input type="checkbox"/>                                                                   | <input type="checkbox"/>                                            | <input type="checkbox"/>                                          |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                               |                                                                                            |                                                                     |                                                                   |

| Professionalism 1: Ethical Principles                                                                                                                                                                                |                                                              |                                                                                   |                                                                                                               |                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                                                              | Level 2                                                      | Level 3                                                                           | Level 4                                                                                                       | Level 5                                                                                                                    |
| Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics | Analyzes straightforward situations using ethical principles | Recognizes need to seek help in managing and resolving complex ethical situations | Independently recognizes and uses appropriate resources for managing and resolving ethical dilemmas as needed | Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution |
| <input type="checkbox"/>                                                                                                                                                                                             | <input type="checkbox"/>                                     | <input type="checkbox"/>                                                          | <input type="checkbox"/>                                                                                      | <input type="checkbox"/>                                                                                                   |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>                                                                                                            |                                                              |                                                                                   |                                                                                                               |                                                                                                                            |

| Professionalism 2: Professional Behavior and Accountability                                               |                                                                 |                                                                                                                   |                                                                                         |                                                                            |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                         | Level 3                                                                                                           | Level 4                                                                                 | Level 5                                                                    |
| Describes when and how to appropriately report lapses in professional behavior                            | Takes responsibility for one's own professional behavior        | Demonstrates professional behavior in complex or stressful situations and reports lapses in professional behavior | Intervenes to prevent and correct lapses in professional behavior in oneself and others | Coaches others when their behavior fails to meet professional expectations |
| Recognizes limits in one's own knowledge/skills and seeks help                                            | Recognizes limits in the team's knowledge/skills and seeks help | Exhibits appropriate confidence and self-awareness of limits in knowledge/skills                                  | Aids junior learners in recognition of limits in knowledge/skills                       |                                                                            |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                        | <input type="checkbox"/>                                                                                          | <input type="checkbox"/>                                                                | <input type="checkbox"/>                                                   |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                 |                                                                                                                   |                                                                                         |                                                                            |

| Professionalism 3: Self-Awareness and Help-Seeking                                                                                                                                                        |                                                                                                                                                          |                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                                                                                                                   | Level 2                                                                                                                                                  | Level 3                                                                                                                                                                          | Level 4                                                                                                                                                                                                                                                                                                                                                                                       | Level 5                                                                                                                 |
| <p>Identifies the institutional resources available to manage personal, physical, and emotional health</p> <p>Demonstrates knowledge of the principles of physician well-being and fatigue mitigation</p> | <p>Monitors personal health and wellness and appropriately mitigates fatigue and/or stress</p> <p>Manages personal time and assures fitness for duty</p> | <p>Promotes healthy habits and creates an emotionally healthy environment for colleagues</p> <p>Models appropriate management of personal health issues, fatigue, and stress</p> | <p>Recognizes and appropriately addresses signs and symptoms of burnout, depression, suicidal ideation, potential for violence, and/or substance abuse in other members of the health care team</p> <p>Proactively modifies schedules or intervenes in other ways to assure that those caregivers under one's supervision maintain personal wellness and do not compromise patient safety</p> | <p>Coaches others when emotional responses or limitations in knowledge/skills do not meet professional expectations</p> |
| <input type="checkbox"/>                                                                                                                                                                                  | <input type="checkbox"/>                                                                                                                                 | <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                      | <input type="checkbox"/>                                                                                                |
| <p><b>Comments:</b></p> <p style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></p>                                                                                              |                                                                                                                                                          |                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                         |

This subcompetency is not intended to evaluate a fellow's well-being. Rather, the intent is to ensure that each fellow has the fundamental knowledge of factors that affect well-being, the mechanisms by which those factors affect well-being, and available resources and tools to improve well-being.

| Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication                      |                                                                                                  |                                                                           |                                                                                                      |                                                             |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                                          | Level 3                                                                   | Level 4                                                                                              | Level 5                                                     |
| Communicates with patients and their families in an understandable and respectful manner                  | Customizes communication, avoiding biases and communication barriers, with patients and families | Delivers complex and difficult information to patients and their families | Facilitates difficult discussions specific to patient and patient's family needs                     | Coaches others in the facilitation of crucial conversations |
| Provides timely updates to patients and their families                                                    | Actively listens to patients and their families to elicit preferences and expectations           | Uses shared decision making to make a personalized care plan              | Effectively negotiates and manages conflict among patients, their families, and the health care team | Coaches others in conflict resolution                       |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                                         | <input type="checkbox"/>                                                  | <input type="checkbox"/>                                                                             | <input type="checkbox"/>                                    |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                                  |                                                                           |                                                                                                      |                                                             |

| Interpersonal and Communication Skills 2: Interprofessional and Team Communication                        |                                                                                      |                                                                                                     |                                                         |                                                                                              |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                              | Level 3                                                                                             | Level 4                                                 | Level 5                                                                                      |
| Clearly and concisely requests and responds to a consultation                                             | Verifies understanding of recommendations when providing or receiving a consultation | Coordinates recommendations from different members of the health care team to optimize patient care | Resolves conflict within the interdisciplinary team     | Coaches flexible communication strategies that value input from all health care team members |
| Uses language that values all members of the health care team                                             | Communicates information effectively to all health care team members                 | Uses active listening to adapt communication style to fit team needs                                | Maintains effective communication in a crisis situation | Facilitates regular health care team-based feedback in complex situations                    |
|                                                                                                           | Solicits feedback on performance as a member of the health care team                 | Communicates concerns and provides feedback to peers and learners                                   | Communicates constructive feedback to superiors         |                                                                                              |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                             | <input type="checkbox"/>                                                                            | <input type="checkbox"/>                                | <input type="checkbox"/>                                                                     |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                      |                                                                                                     |                                                         |                                                                                              |

| Interpersonal and Communication Skills 3: Communication within Health Care Systems                        |                                                                                                                      |                                                                                                                       |                                                                                                                                                                               |                                                                                                              |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Level 1                                                                                                   | Level 2                                                                                                              | Level 3                                                                                                               | Level 4                                                                                                                                                                       | Level 5                                                                                                      |
| Verifies and accurately records current and relevant information in the patient's chart                   | Concisely documents diagnostic and therapeutic reasoning, accurately reflecting patient course for common conditions | Concisely documents diagnostic and therapeutic reasoning, accurately reflecting patient course for complex conditions | Concisely documents diagnostic and therapeutic reasoning, accurately reflecting patient course for all conditions while satisfying institutional billing needs and compliance | Mentors others in documenting diagnostic and therapeutic reasoning, and accurately reflecting patient course |
| <input type="checkbox"/>                                                                                  | <input type="checkbox"/>                                                                                             | <input type="checkbox"/>                                                                                              | <input type="checkbox"/>                                                                                                                                                      | <input type="checkbox"/>                                                                                     |
| <b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div> |                                                                                                                      |                                                                                                                       |                                                                                                                                                                               |                                                                                                              |