

Entrustable Professional Activities for Vascular Surgery

2021
VERSION 1.0

Vascular Surgery: TTD EPA #1

Recognizing, assessing and diagnosing patients with urgent vascular conditions and providing a preliminary management plan

Key Features:

- This EPA focuses on recognizing vascular emergencies, promptly seeking assistance, and participating in preliminary management.
- Examples of vascular emergencies include acute ischemia, a ruptured or symptomatic aneurysm, acute aortic syndrome (e.g. aortic dissection, thoracic rupture, occlusion), vascular trauma, symptomatic carotid disease, post-operative complications (e.g. bleeding, graft occlusion, pseudoaneurysm), or venous disease (e.g. iliofemoral DVT, phlegmasia).

Assessment Plan:

Direct observation or case review by supervisor or senior trainee

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Condition (select all that apply): rupture/symptomatic aneurysm; acute aortic syndrome; acute mesenteric ischemia; vascular trauma; symptomatic carotid disease; post-procedure complication; venous disease; other condition
- Observation: direct; case review

Collect 3 observations of achievement

- A variety of conditions
- At least 1 direct observation
- At least 2 different observers

Relevant Milestones:

- 1 ME 2.2 Elicit an accurate, concise and relevant history**
 - 2 ME 2.2 Perform a physical exam**
 - 3 ME 2.2 Select and interpret appropriate labs, imaging and testing**
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- 4 ME 2.1 Determine the acuity of the condition and the priorities for patient care**
- 5 ME 2.4 Develop and implement an initial management plan**
- 6 ME 3.3 Recognize situations requiring emergent or urgent surgical intervention**
- 7 ME 1.5 Recognize urgent problems that need the involvement of more experienced colleagues and seek appropriate assistance**

Vascular Surgery: TTD EPA #2

Assessing and diagnosing patients with non-urgent vascular conditions and providing a preliminary management plan

Key Features:

- This EPA includes obtaining a patient history, performing a physical exam, ordering appropriate investigations, developing a differential diagnosis, formulating a preliminary management plan, and providing appropriate and timely medical documentation.
- This EPA includes performance of a pulse exam and ankle-brachial index test (ABI).

Assessment Plan:

Direct observation or case review (e.g. case discussions/presentations, review of consult letter) by supervisor or senior trainee

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Condition: atherosclerotic arterial disease; venous disease; aneurysmal disease; wounds; dialysis access; cerebrovascular disease; other condition
- Pulse exam/ABI test: yes; no
- Observation: direct; case review

Collect 5 observations of achievement

- A variety of conditions
- At least 1 including pulse exam and ABI test
- At least 3 direct observations
- At least 2 different observers

Relevant Milestones:

- 1 COM 1.1 Demonstrate empathy, respect and compassion towards patients**
- 2 ME 2.2 Elicit an accurate, concise and relevant history**
- 3 ME 2.2 Perform a focused vascular physical exam**
- 4 ME 2.2 Perform an ankle-brachial index (ABI) test**
- 5 ME 2.2 Identify vascular risk factors**
- 6 ME 2.2 Select and order initial tests**
- 7 ME 2.2 Develop a differential diagnosis relevant to the patient presentation**

8 COM 5.1 Complete clinical documentation

9 P 1.1 Exhibit appropriate professional behaviours

Vascular Surgery: TTD EPA #3

Assisting in the performance of elective open and endovascular procedures

Key Features:

- This EPA focuses on application of the relevant knowledge, case review, procedural flow, surgical principles, and procedural skills required to provide surgical assistance for percutaneous and open procedures.

Assessment Plan:

Direct observation by surgeon, interventional radiologist or senior trainee

Use Form 1. Form collects information on:

- Setting: OR; angiography suite; simulation
- Approach: endovascular; open; hybrid

Collect 4 observations of achievement

- At least 2 endovascular cases
- At least 2 open cases
- At least 2 different observers

Relevant Milestones:

- 1 ME 1.4 Apply knowledge of anatomy and recognize landmarks**
- 2 ME 1.4 Apply knowledge of radiation safety procedures**
- 3 ME 3.4 Prepare, position and drape the patient**
- 4 ME 3.4 Demonstrate understanding of the surgical approach**
- 5 ME 3.4 Use ultrasound appropriately for guided access**
- 6 P 1.2 Prepare for the case, reviewing relevant patient information and imaging**

Vascular Surgery: Foundations EPA #1

Recognizing and providing a comprehensive management plan for patients with an urgent vascular condition

Key Features:

- This EPA focuses on patients with the following acute and urgent vascular presentations: acute limb ischemia, foot related sepsis, symptomatic carotid disease, symptomatic aneurysm, acute aortic syndromes, acute mesenteric ischemia, vascular trauma, proximal deep venous thrombosis, and bleeding.
- This EPA includes triaging consults, assessing and diagnosing patients, requesting relevant investigations, and initiating a comprehensive management plan.
- It also includes documentation, and communication and collaboration with other services to expedite patient care.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation or case review by supervisor, may include feedback from patients, families and/or other health professionals

Use Form 1. Form collects information on:

- Setting: emergency department; ICU; ward; recovery room; clinic
- Condition: acute limb ischemia; foot related sepsis; symptomatic carotid disease; symptomatic aneurysm; acute aortic syndromes; acute mesenteric ischemia; vascular trauma; proximal deep venous thrombosis; bleeding patient; other condition
- Simulation: yes; no
- Observation: direct; case review

Collect 6 observations of achievement

- A variety of presentations
- At least 3 direct observations
- At least 3 different observers

Relevant Milestones:

- 1 ME 2.1 Determine the acuity of the condition and the priorities for patient care**
 - 2 P 1.1 Recognize personal limits and seek assistance as needed**
 - 3 ME 2.4 Develop and implement a management plan**
 - 4 ME 2.2 Select and interpret appropriate investigations based on a differential diagnosis**
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- 5 ME 3.1 Describe the indications, contraindications, risks, and alternatives for a proposed procedure/ therapy to the patient and/or family**
- 6 ME 2.3 Establish goals of care with the patient/family**
- 7 COM 5.1 Document clinical encounters to convey the clinical assessment and the rationale for decisions**
- 8 COL 1.3 Communicate effectively with physicians and other health care professionals**
- 9 ME 1.7 Identify clinical situations in which complexity, uncertainty, and ambiguity may play a role in decision-making**

Vascular Surgery: Foundations EPA #2

Providing comprehensive consultation for patients with common non-urgent vascular conditions

Key Features:

- This EPA focuses on an elective surgical consultation and includes triage, assessment, diagnosis, and comprehensive management of the following common vascular conditions: chronic arterial insufficiency (asymptomatic, claudication and limb threatening), chronic venous insufficiency, uncomplicated aortic and peripheral aneurysm, carotid disease, dialysis access, and wound assessment and management.
- This EPA includes preoperative risk assessment, and communicating information regarding initial investigations and management decisions to referring services, as well as timely documentation and plans for follow-up.
- It may include obtaining informed consent.

Assessment Plan:

Direct observation or case review by supervisor with input from patients, families and other health professionals

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Condition: chronic arterial insufficiency; chronic venous insufficiency; uncomplicated aortic and peripheral aneurysm; carotid disease; dialysis access; wound assessment and management
- Complexity: low; high (provide additional information)
- Observation: direct; case review

Collect 6 observations of achievement

- A variety of presentations
- At least 3 direct observations
- At least 3 different observers

Relevant Milestones:

- 1 ME 2.2 Elicit a history and perform a physical exam**
 - 2 ME 2.4 Develop and implement a management plan**
 - 3 ME 3.1 Describe the indications, contraindications, risks, and alternatives for a proposed procedure/therapy to the patient and/or family**
 - 4 ME 2.2 Select and interpret appropriate investigations based on a differential diagnosis**
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- 5 ME 4.1 Coordinate investigation, treatment, and follow-up plans**
- 6 COM 5.1 Document clinical encounters to convey the clinical assessment and the rationale for decisions**
- 7 COL 1.3 Communicate effectively with physicians and other health care professionals**

Vascular Surgery: Foundations EPA #3

Selecting, performing and interpreting vascular diagnostic tests

Key Features:

- This EPA focuses on interpretation of non-invasive, invasive and cross-sectional vascular imaging.
- This includes appropriate selection, performance, and interpretation of non-invasive vascular imaging and tests, including duplex ultrasound assessment of the lower limb, aorta, and carotid artery, and reporting the findings as appropriate.
- It also includes interpretation of invasive imaging, including angiograms and venograms, and cross-sectional imaging.

Assessment Plan:

Direct observation and/or review of case and/or report by supervisor

Use Form 1. Form collects information on:

- Test (select all that apply): arterial duplex; venous duplex; plethysmography; angiogram; venogram; CT-angiogram; MR-Angiogram; other
- Anatomic location: cerebrovascular; thoracic; abdominal; pelvic; upper extremity; lower extremity

Collect 6 observations of achievement

- A variety of cases

Relevant Milestones:

- 1 ME 1.4 Apply knowledge of vascular anatomy and hemodynamics**
 - 2 ME 3.1 Describe the indications for and limitations of non-invasive and invasive vascular tests**
 - 3 ME 5.2 Apply the principles of radiation safety and protection, including safe use for both patient and operator**
 - 4 ME 2.2 Perform a segmental pressure measurement and/or ankle-brachial (ABI) test**
 - 5 ME 2.2 Assess the quality and validity of the study, and any impact on the diagnostic interpretation**
 - 6 ME 2.2 Interpret vascular diagnostic tests**
 - 7 COM 5.1 Communicate critical results urgently as needed**
 - 8 L 2.2 Consider costs when choosing care options**
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Vascular Surgery: Foundations EPA #4

Performing common/foundational vascular surgical procedures

Key Features:

- This EPA focuses on surgical decision making and performance of common vascular procedures.
- The observation of this EPA is divided into 2 parts: planning and consent; and performing the procedure.
- Part A focuses on making a plan for the procedure and includes reviewing relevant imaging and other clinical information, developing a surgical approach to the case and conveying the plan, rationale, risks and alternatives to the patient in a discussion about informed consent.
- Part B focuses on performing the following common vascular technical skills: open vascular exposure and closure, including common femoral artery, brachial/radial, and saphenofemoral vein junction; endovascular access, and cannulation techniques including percutaneous common femoral artery access; basic vascular techniques, including vascular control techniques, arteriotomy, vascular anastomosis, closure of arteriotomy, arterial patch angioplasty, basic arterial embolectomy, saphenectomy, fasciotomy, and amputation; basic endovascular techniques, including diagnostic angiogram (contrast, c-arm and table), guidewire and catheter basic skills for stenotic lesions, endovascular angioplasty, stenting, and vascular access closure.
- These technical skills may be observed in any endovascular, open, or hybrid procedure and for patients with any condition.

Assessment Plan:

Part A: Planning and consent

Direct observation and case review by supervisor or senior trainee

Use Form 1. Form collects information on:

- Type of procedure: open; endovascular; hybrid
- Procedure (write in):

Collect 5 observations of achievement

- At least 1 open procedure
- At least 1 endovascular procedure
- A mix of different procedures

Part B: Performing a procedure

Direct observation by supervisor or senior trainee

Use Form 2. Form collects information on:

- Setting: simulation lab; operating/hybrid room; other setting
- Skills (select all that apply): endovascular access technique; basic endovascular technique; open vascular exposure; closure; basic vascular technique; femoral artery dissection and closure

- Specific procedure (write in):

Collect 25 observations of achievement

- At least 5 endovascular access technique
- At least 5 basic endovascular technique
- At least 5 basic vascular technique
- At least 5 non-femoral artery vascular exposure
- At least 5 femoral artery dissection and closure
- At least 2 different observers

Relevant Milestones:

Part A: Planning

- 1 ME 2.2 Interpret vascular diagnostic tests**
- 2 ME 1.4 Apply knowledge of anatomy and the techniques of vascular surgery procedures**
- 3 ME 3.4 Develop a surgical approach relevant to the patient presentation**
- 4 COM 3.1 Describe the indications, contraindications, risks and alternatives for a proposed procedure/therapy to the patient and/or family**
- 5 COM 4.3 Use effective communication skills and strategies, such as body posture, language at the appropriate level, and periodic checks for understanding**
- 6 COM 5.1 Document the consent discussion in an accurate and complete manner**

Part B: Performing a procedure

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
- 2 ME 3.4 Prepare, position and drape the patient**
- 3 ME 3.4 Use surgical instruments and equipment correctly**
- 4 ME 3.4 Perform the procedure in a skilful, fluid and safe manner**
- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**
- 7 COL 1.2 Work effectively with the OR team**

Vascular Surgery: Foundations EPA #5

Recognizing and providing initial management for patients with common complications

Key Features:

- This EPA focuses on the recognition and initial management of complications from treatment, including complications from open surgery, common endovascular interventions and other medical complications.
- Examples of complications from open surgery include bleeding, acute ischemia, stroke, myocardial infarction, graft failure (stenosis or thrombosis), wound complications, graft infection, and compartment syndrome.
- Examples of complications from common endovascular interventions include dissection, thrombosis, perforation, pseudoaneurysm, and embolism.
- This EPA includes ordering tests and investigations, and clinical monitoring as appropriate.

Assessment Plan:

Direct observation and/or case review by supervisor or senior trainee

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic; recovery room; intensive care unit
- Open surgery complication (select all that apply): bleeding; acute ischemia; stroke; graft failure (stenosis or thrombosis); wound complications; graft infection; paraplegia; other complication; N/A
- Endovascular complication (select all that apply): dissection; thrombosis; perforation; pseudoaneurysm; embolism; hematoma; paraplegia; other complication; N/A
- Other medical complications (select all that apply): cardiac; respiratory; metabolic; infectious; gastrointestinal; delirium; other complication; N/A

Collect 9 observations of achievement

- At least 3 open surgery post-op complications
- At least 3 endovascular complications
- At least 3 medical complications
- At least 3 different observers

Relevant Milestones:

- 1 ME 1.5 Perform a clinical assessment that addresses all relevant issues**
 - 2 ME 2.1 Recognize complications of vascular surgery conditions and/or procedures**
 - 3 ME 2.2 Select and interpret appropriate investigations based on a**
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differential diagnosis

- 4 ME 2.4 Develop and implement an initial management plan**
- 5 ME 4.1 Develop a plan to follow up on investigations and monitor response to treatment**
- 6 COM 3.2 Disclose adverse events and/or outcomes to the patient and family accurately and appropriately**
- 7 ME 5.1 Identify potential improvement opportunities arising from patient safety incidents**

Vascular Surgery: Core EPA #1

Executing scholarly work

Key Features:

- This EPA includes using appropriate research methods, analyzing results, critically reflecting on the findings and disseminating the results. It may include obtaining grant funding and preparing a manuscript for publication.
- This may include basic or clinical science related to vascular surgery or cardiovascular science, or medical education research.
- The achievement of this EPA may be observed via submission of a manuscript suitable for submission to a peer reviewed journal, or presentation of the project at a peer-reviewed local, regional, provincial or national scientific meeting, or thesis committee.

Assessment Plan:

Review of resident's manuscript and/or presentation by research supervisor, may include input from research team members

Use Form 1.

Collect 1 observation of achievement

Relevant Milestones:

- 1 **L 4.1 Organize work to manage clinical, scholarly and other responsibilities**
- 2 **S 4.4 Generate focused scholarly questions**
- 3 **S 3.3 Critically evaluate the integrity, reliability, and applicability of the literature**
- 4 **S 4.4 Summarize the findings of a literature review**
- 5 **S 4.2 Identify ethical principles in research**
- 6 **P 1.4 Recognize and manage conflicts of interest**
- 7 **S 4.4 Perform data analysis**
- 8 **S 4.4 Integrate existing literature and findings of data collection**
- 9 **S 4.4 Identify areas for further investigation**
- 10 **S 4.5 Disseminate the results of scholarly activity**

Vascular Surgery: Core EPA #2

Leading the team caring for patients on the vascular surgery service

Key Features:

- This EPA focuses on medical expertise and leadership applied to the coordination of care for a group of patients, in collaboration with the interprofessional team.
- This EPA includes the administrative aspects of team scheduling, the supervision of junior learners, and involvement in the quality assurance and quality improvement and patient safety aspects of the service.
- This includes responsibility for discussions regarding goals of care and changes in clinical status, and for completion of clinical documentation such as progress, discharge and OR notes
- The observation of this EPA is divided into 2 parts: patient care; and interprofessional care/supervision.
- The patient care aspects are based on observation of at least one block/month of time.
- The observation of the interprofessional care/supervision aspects of this EPA is optional and at the discretion of the program.

Assessment Plan:

Part A: Patient care

Direct observation by supervisor

Use Form 1.

Collect 4 observations of achievement

- At least 2 different observers

Part B: Interprofessional care/supervision (optional)

Supervisor solicits feedback from multiple team members who provide feedback individually, which is then collated to one report by supervisor

Use Form 3

Collect feedback on at least 1 occasion, from at least 4 team members

Relevant Milestones:

Part A: Patient Care

- 1 **ME 1.6 Carry out professional duties in the face of multiple, competing demands**
- 2 **ME 3.1 Determine the most appropriate procedures or therapies for the purpose of assessment and/or management**
- 3 **S 3.4 Integrate best evidence and clinical expertise into decision-making**
- 4 **COM 1.5 Manage disagreements and emotionally charged conversations with patients and/or families**
- 5 **ME 2.4 Develop and implement patient-centered discharge and follow-up plans**
- 6 **HA 1.1 Facilitate timely patient access to services and resources**
- 7 **L 3.1 Plan work schedules for the service team**
- 8 **L 4.2 Run the service efficiently, safely and effectively**

Part B: Interprofessional care/supervision

- 1 **P 1.1 Exhibit appropriate professional behaviours**
- 2 **COL 2.1 Delegate team members' tasks appropriate to their level of training**
- 3 **P 1.1 Respond punctually to requests from patients or other health care professionals**
- 4 **COL 1.3 Communicate effectively with physicians and other health care professionals**
- 5 **COL 2.2 Manage conflict between team members**
- 6 **S 2.4 Provide formal and informal teaching for junior learners**
- 7 **S 2.5 Provide junior learners with useful timely feedback**
- 8 **S 2.2 Ensure a safe learning environment for all members of the team**
- 9 **S 2.3 Supervise junior learners to ensure patient safety**

Vascular Surgery: Core EPA #3

Managing patients with aortoiliac aneurysms

Key Features:

- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex aortic pathology, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, and closure/hemostasis.
- This includes complex cases, such as juxta/suprarenal, inflammatory, and associated iliac disease.
- The observation of this EPA is divided into 3 parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience

Assessment Plan:

Part A: Patient assessment

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Anatomic location: infrarenal; juxtarenal; suprarenal; rupture; other location
- Urgency: elective; urgent; emergent
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 5 observations of achievement

- At least 2 high complexity
- At least 3 different observers

Part B: Surgical performance

Direct observation by supervisor

Use form 2. Form collects information on:

- Type of repair: infrarenal; juxtarenal; suprarenal; rupture; other repair
- Condition: standard; inflammatory; infected; ruptured; other condition
- Approach: endovascular; open; hybrid
- Complexity: low; high (provide additional information)

Collect 6 observations of achievement

- At least 1 open rupture
- At least 3 endovascular (one of which is complex)
- At least 3 open (one of which is complex)
- At least 3 different observers

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
- 2 ME 3.4 Prepare, position and drape the patient**
- 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**

- 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**
- 7 COL 1.2 Work effectively with the OR team**

Vascular Surgery: Core EPA #4

Managing patients with aortoiliac occlusive disease (acute/chronic)

Key Features:

- This EPA includes completing a workup and diagnosis, including consultation, imaging, and other investigations, as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex aortic pathology, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, fasciotomies, and closure/hemostasis.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Urgency: elective; urgent
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 5 observations of achievement

- At least 2 high complexity
- At least 3 different observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Type of repair: bypass; endarterectomy; thrombectomy; angioplasty
- Anatomic location: aorta; aortoiliac; isolated iliac; femoral; proximal; distal; extra-anatomic
- Condition: acute; chronic
- Approach: endovascular; open; hybrid
- Complexity: low; high (provide additional information)

Collect 6 observations of achievement

- At least 3 endovascular (one of which is complex)
- At least 3 open (one of which is complex and one of which is extra-anatomic)
- At least 3 different observers

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
 - 2 ME 3.4 Prepare, position and drape the patient**
 - 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
 - 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
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- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**
- 7 COL 1.2 Work effectively with the OR team**

Vascular Surgery: Core EPA #5

Managing patients with upper and lower extremity arterial disease

Key Features:

- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex anatomy, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, fasciotomies, peripheral aneurysm repair, interventions of the subclavian artery, and closure/hemostasis.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Anatomic location: upper limb; lower limb
- Urgency: elective; urgent
- Complexity: low; high (provide additional information)
- Observations: direct; case/chart review

Collect 5 observations of achievement:

- At least 1 upper anatomic location
- At least 3 different observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Procedure: bypass; endarterectomy; thrombectomy; angioplasty; minor amputation; major amputation; other
- Anatomic location: upper extremity; popliteal; tibial; other
- Approach: endovascular; open; hybrid
- Condition: acute; chronic
- Complexity: high; low

Collect 14 observations of achievement

- At least 2 major amputations
- At least 2 minor amputations
- At least 3 endovascular (one of which is complex e.g. tibial, CTO)
- At least 3 open (one upper extremity procedure and tibial bypass)
- At least 3 different observers

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
- 2 ME 3.4 Prepare, position and drape the patient**
- 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**

- 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**
- 7 COL 1.2 Work effectively with the OR team**

Vascular Surgery: Core EPA #6

Managing patients with thoracic aortic pathology

Key Features:

- This EPA includes acute (dissection, intramural hematoma, penetrating aortic ulcer) and chronic presentations (dissection, aneurysm, occlusive).
- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex aortic pathology, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, and closure/hemostasis.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Condition: elective aneurysm; urgent aneurysm; chronic dissection; acute aortic syndrome; traumatic aortic injury
- Anatomic location: arch; descending; thoracoabdominal
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 3 observations of achievement

- At least 1 patient with acute aortic syndrome
- At least 2 observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Type of repair: arch; descending; thoracoabdominal; other
- Condition: aneurysm; chronic dissection; acute aortic syndrome; trauma
- Approach: endovascular; open; hybrid

Collect 2 observations of achievement

- At least 1 endovascular approach

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
 - 2 ME 3.4 Prepare, position and drape the patient**
 - 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
 - 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
 - 5 ME 3.4 Establish plans for post-operative care**
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- 6 **COM 5.1** Document surgical procedures in a complete and timely manner
- 7 **COL 1.2** **Work effectively with the OR team**

Vascular Surgery: Core EPA #7

Managing patients with visceral arterial disease

Key Features:

- This EPA includes acute and/or chronic occlusive, and aneurysmal mesenteric/renal disease.
- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex pathology, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, and closure/hemostasis.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Condition: elective aneurysm; urgent aneurysm; acute occlusive; chronic occlusive
- Anatomic location: mesenteric; renal
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 3 observations of achievement

- At least 1 mesenteric case
- At least 1 renal case

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Anatomic location: mesenteric; renal
- Condition: aneurysm; acute occlusive; chronic occlusive
- Approach: endovascular; open; hybrid

Collect 1 observation of achievement

- At least 1 open revascularization (may include embolectomy)

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
 - 2 ME 3.4 Prepare, position and drape the patient**
 - 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
 - 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
 - 5 ME 3.4 Establish plans for post-operative care**
-

- 6 **COM 5.1** Document surgical procedures in a complete and timely manner
- 7 **COL 1.2** **Work effectively with the OR team**

Vascular Surgery: Core EPA #8

Managing patients with extracranial cerebrovascular disease

Key Features:

- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; consideration for cerebral protection, recognition of complex anatomy and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, cerebral monitoring and protection, and closure/hemostasis.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and, a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Condition: symptomatic; asymptomatic
- Anatomic location: carotid; vertebrobasilar/subclavian steal
- Observation: direct; case/chart review

Collect 5 observations of achievement

- At least 1 vertebrobasilar/subclavian steal
- At least 1 symptomatic carotid
- At least 1 asymptomatic carotid
- At least 3 different observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Type of repair: bypass; carotid endarterectomy; stent; subclavian revascularization
- Condition: symptomatic; asymptomatic
- Approach: endovascular; open; hybrid

Collect 4 observations of achievement

- At least 2 open carotid endarterectomies
- At least 1 open subclavian revascularization
- At least 2 different observers

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
 - 2 ME 3.4 Prepare, position and drape the patient**
 - 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
 - 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
-

- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**
- 7 COL 1.2 Work effectively with the OR team**

Vascular Surgery: Core EPA #9

Managing hemodialysis access

Key Features:

- This EPA includes providing consultation, selecting and interpreting imaging, and other investigations as appropriate, and planning and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention and closure/hemostasis.
- This EPA includes patients presenting for new access creation as well as those with acute and chronic complications of hemodialysis access.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic
- Urgency: elective; urgent
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 5 observations of achievement

- At least 4 high complexity cases
- At least 2 different observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Complexity: low; high (provide additional information)

Collect 5 observations of achievement

- At least 3 high complexity cases
- At least 2 different observers

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 7 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
- 2 ME 3.4 Prepare, position and drape the patient**
- 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
- 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**
- 7 COL 1.2 Work effectively with the OR team**

Vascular Surgery: Core EPA #10

Managing patients with vascular injuries (traumatic or iatrogenic) and those needing reconstruction following oncologic surgery

Key Features:

- This EPA focuses on the diagnosis and management of vascular injuries (trauma, and iatrogenic) and oncologic reconstruction.
- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, screening and making a plan for surveillance; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex pathology, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, proximal and distal control, anastomosis or endovascular intervention, fasciotomies and closure/hemostasis.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic; operating room
- Anatomic location: trunk; extremity; head and neck
- Context: trauma; iatrogenic; oncology
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 3 observations of achievement

- At least 2 different anatomic locations
- At least 2 different observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Type of repair: primary repair; bypass; angioplasty; other
- Anatomic location: trunk; extremity; neck; other
- Context: trauma; iatrogenic; oncology
- Approach: endovascular; open; hybrid
- Complexity: low; high (provide additional information)

Collect 3 observations of achievement

- At least 1 trauma
- At least 2 different anatomic locations

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 7 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
 - 2 ME 3.4 Prepare, position and drape the patient**
 - 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
 - 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
 - 5 ME 3.4 Establish plans for post-operative care**
 - 6 COM 5.1 Document surgical procedures in a complete and timely manner**
-

7 COL 1.2 Work effectively with the OR team

Vascular Surgery: Core EPA #11

Managing patients with chronic venous disease

Key Features:

- This EPA includes upper, lower and central venous disease.
- This EPA includes completing a workup and diagnosis including consultation, imaging, and other investigations as appropriate; providing conservative management, as appropriate, including risk factor modification, compression and pharmacotherapy; performing pre-operative risk assessment and preparation for surgery; obtaining informed consent; recognizing complex pathology, and selecting the operation, planning, and selecting techniques for surgical approach.
- This EPA also includes performing the surgical procedure: exposure/access, endovenous techniques and image guidance.
- The observation of this EPA is divided into three parts: patient assessment; surgical performance; and a log of procedures to demonstrate the breadth of experience.

Assessment Plan:

Part A: Patient assessment

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: emergency department; inpatient; clinic;
- Condition: ulcer; varicosities; other
- Complexity: low; high (provide additional information)
- Observation: direct; case/chart review

Collect 5 observations of achievement

- At least 2 patients with ulcers
- At least 2 different observers

Part B: Surgical performance

Direct observation by supervisor

Use Form 2. Form collects information on:

- Condition: ulcer; varicosities; other
- Approach: endovascular; open

Collect 3 observations of achievement

- At least 2 different observers

Part C: Logbook

Logbook of vascular surgery procedures

Logbook tracks:

- Procedure (write in):
- Role in procedure (write in):

Submit 1 logbook

Relevant Milestones:

Part A: Patient assessment

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
- 7 ME 4.1 Determine the need and appropriate timing of referral for pre-operative optimization**
- 8 HA 1.2 Select and provide relevant patient education resources**

Part B: Surgical performance

- 1 ME 1.4 Apply knowledge of the steps of the procedure, potential risks and complications, and means to avoid/overcome them**
- 2 ME 3.4 Prepare, position and drape the patient**
- 3 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner**
- 4 ME 3.4 Execute a clear operative plan, efficiently performing steps, and avoiding and managing complications**
- 5 ME 3.4 Establish plans for post-operative care**
- 6 COM 5.1 Document surgical procedures in a complete and timely manner**

7 COL 1.2 Work effectively with the OR team

Vascular Surgery: Core EPA #12

Managing patients with acute venous disease

Key Features:

- This EPA focuses on the medical management of patients with acute central, upper and lower extremity venous disease, and may include consideration of surgical or endovascular therapies as appropriate.
- This EPA includes identifying the role and rationale for thrombectomy, thrombolysis, and inferior vena cava filters.

Assessment Plan:

Direct observation and case/chart review by supervisor

Use Form 1.

Collect 3 observations of achievement

- At least 2 different observers

Relevant Milestones:

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Develop a plan for management which may include medical management, non-operative intervention and/or surgical intervention**
- 6 HA 1.2 Select and provide relevant patient education resources**

Vascular Surgery: Core EPA #13

Managing patients with vascular malformations and congenital anomalies

Key Features:

- This EPA includes completing a workup including consultation, imaging, and other investigations as appropriate, and developing a management plan.
- This EPA highlights the importance of a multidisciplinary approach to management.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Condition: congenital anomaly; vascular malformation; other condition

Collect 2 observations of achievement

- At least 1 congenital anomaly
- At least 1 vascular malformation

Relevant Milestones:

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Determine the need for, plan for, and timing of surgical intervention**
- 6 COL 1.3 Work effectively with clinical colleagues in the development and implementation of a management plan**
- 7 HA 1.2 Select and provide relevant patient education resources**

Vascular Surgery: Core EPA #14

Managing patients with nonatheromatous vascular disease

Key Features:

- This EPA includes vasospastic disease, thoracic outlet syndrome (TOS), occupational syndromes, connective tissues diseases, vasculitic syndromes, fibromuscular dysplasia, popliteal entrapment, and cystic adventitial disease.
- This EPA includes completing a workup including consultation, imaging, and other investigations as appropriate, and developing a management plan.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Condition: TOS; vasculitis; occupational; popliteal artery entrapment; popliteal adventitial cystic disease; connective tissue disorder; fibromuscular dysplasia; other condition
- Complexity: low; high (provide additional information)

Collect 3 observations of achievement

- At least 3 different conditions
- At least 1 TOS

Relevant Milestones:

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
 - 2 ME 2.2 Select and interpret appropriate investigations**
 - 3 ME 2.3 Establish goals of care**
 - 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
 - 5 ME 2.4 Develop a plan for management which may include medical management, non-operative intervention and/or surgical intervention**
 - 6 ME 2.4 Provide a comprehensive approach for risk factor management and screening**
 - 7 ME 4.1 Determine the need and appropriate timing of referral to another health care professional**
-

8 HA 1.2 Select and provide relevant patient education resources

Vascular Surgery: Core EPA #15

Managing patients with lymphatic disorders

Key Features:

- This EPA includes completing a workup including consultation, imaging, and other investigations as appropriate, and developing a management plan.
- This includes instituting the principles of wound compression and a multidisciplinary approach to management, with consideration of medical and surgical management as appropriate.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation and/or case/chart review by supervisor

Use Form 1.

Collect 2 observations of achievement

Relevant Milestones:

- 1 ME 2.2 Focus the clinical encounter, performing it in a time-effective manner, without excluding key elements**
- 2 ME 2.2 Select and interpret appropriate investigations**
- 3 ME 2.3 Establish goals of care**
- 4 ME 3.1 Integrate all sources of information to develop a procedural or therapeutic plan**
- 5 ME 2.4 Provide medical management, including wound compression**
- 6 COL 1.3 Work effectively with clinical colleagues in the development and implementation of a management plan**
- 7 ME 4.1 Determine the need and appropriate timing of referral to another health care professional**
- 8 HA 1.2 Select and provide relevant patient education resources**

Vascular Surgery: TTP EPA #1

Coordinating, organizing, and executing the day's list of surgical procedures

Key Features:

- This EPA integrates the skills required to function effectively as a surgeon, including managing and prioritizing an elective and urgent surgical case load, supervising junior learners, and working effectively with other health professionals.
- The observation of this EPA is based on a full day's OR list.

Assessment Plan:

Direct and indirect observation by supervisor with feedback from the healthcare team, including other physicians, nurses, junior residents, and/or other health professionals

Use Form 2. Form collects information on:

- Operative list: elective; urgent
- Number of cases that day (write in):

Collect 2 observations of achievement

- At least 1 elective operative list
- At least 1 urgent operative list
- At least 2 different observers

Relevant Milestones:

- 1 P 1.2 Prepare for surgical procedures, reviewing the list of planned operations**
- 2 ME 3.4 Select appropriate materials and equipment for the procedure**
- 3 P 4.1 Maintain professional clinical performance in demanding or stressful clinical settings**
- 4 ME 3.4 Perform procedures in a skilful and safe manner**
- 5 ME 3.4 Manage unexpected intraoperative findings and perioperative issues, adjusting the procedure as appropriate**
- 6 ME 4.1 Establish plans for post-operative care**
- 7 COL 3.2 Transition patient care safely to the post-operative team**
- 8 COM 3.1 Convey information about the procedure, operative findings, and patient status to the family clearly and compassionately**

- 9 COM 5.1** Document surgical procedures in an accurate, complete and timely manner

Vascular Surgery: TTP EPA #2

Managing a vascular clinic

Key Features:

- This EPA focuses on the management of clinical responsibilities over and above the care of individual patients.
- This EPA includes triaging referrals and seeing them in an appropriate time frame, managing OR booking and scheduling, completing dictations in timely manner, reviewing test results/acting on results appropriately and in timely manner, and working effectively with the staff and/or other learners in the clinic.
- This EPA may be observed in any clinic experience where the supervisor has the opportunity for a longitudinal observation of the resident.

Assessment Plan:

Direct observation and review of cases/consult letters/notes by supervisor, soliciting and incorporating feedback from clinic staff and administrative personnel

Use Form 1. Form collects information on:

- Clinic (write in):

Collect 2 observations of achievement

- At least 2 different observers

Relevant Milestones:

- 1 ME 1.6 Prioritize patients based on the urgency of clinical presentations**
- 2 ME 2.4 Establish patient centered-management plans**
- 3 COM 5.1 Document clinical encounters in an accurate, complete and timely manner**
- 4 L 4.2 Book operative cases with appropriate urgency, duration, and equipment**
- 5 L 4.1 Manage time effectively in the ambulatory clinic**
- 6 L 4.1 Review and act on test results in a timely manner**
- 7 P 1.1 Respond punctually to requests from patients or other health care providers**
- 8 L 4.1 Integrate supervisory and teaching responsibilities into the overall management of the clinical service**

Vascular Surgery: TTP EPA #3

Managing patients with rare and/or complex vascular surgical conditions

Key Features:

- This EPA integrates knowledge, expertise in clinical assessment, surgical decision-making and technical expertise to manage challenging clinical cases, including those where there is uncertainty in the diagnosis and/or management.
- This may include developing an appropriate plan, consulting with other physicians/surgeons, and preoperative, intraoperative and/or postoperative management.
- This EPA includes long-term complications of vascular procedures.
- This EPA may be observed in simulation, in presentations at case rounds, or with a clinical case.

Assessment Plan:

Direct observation and/or case/chart review by supervisor

Use Form 1. Form collects information on:

- Setting: case rounds; simulation; clinical practice

Collect 3 observations of achievement

- Must include a variety of settings
- At least 3 different observers

Relevant Milestones:

- 1 ME 1.4 Apply a broad base and depth of knowledge in Vascular Surgery**
- 2 ME 1.5 Perform a clinical assessment that addresses all relevant issues**
- 3 COL 1.3 Consult with other physicians**
- 4 S 3.4 Integrate best evidence and clinical expertise into decision-making**
- 5 ME 2.4 Develop a plan for management which may include medical management, non-operative intervention and/or surgical intervention**
- 6 COM 3.1 Convey information related to diagnosis and/or treatment clearly and compassionately**
- 7 ME 3.4 Plan and select techniques for the surgical approach**
- 8 ME 3.4 Perform procedures in a skilful and safe manner**
- 9 ME 4.1 Develop and/or implement a plan for ongoing care**

10 P 1.1 Identify limits in one's own expertise

Vascular Surgery: TTP EPA #4

Developing and implementing a personal learning plan geared to setting of future practice

Key Features:

- This EPA may include a variety of scenarios. Examples include: a plan to act on the performance gaps identified in another EPA; a plan to prepare for fellowship training; a plan for managing a vascular surgery practice, and demonstrating understanding the practical aspects of running an office, including hiring staff, remuneration, medico-legal issues etc.; and a plan to prepare for practice in a specific setting (i.e. community) and/or a setting requiring distinct skills.
- Achievement of this EPA includes providing a) the rationale for a learning plan, b) self-reflection, c) a personal needs assessment, d) time management and e) identification of the methods to achieve the personal learning plan such as literature review, clinical training, conference attendance and/or rounds attendance.
- Observation of this EPA is divided into two parts: developing a plan; and implementing the plan.
- The plan must be submitted for review (i.e. part A) before the midpoint of the TTP stage.

Assessment Plan:

Part A: Plan

Supervisor review of resident's submission of a personal learning plan

Use Form 4

Collect 1 observation of achievement

Part B: Implementation and progress

Direct or indirect observation of learning plan implementation by supervisor

Use Form 4

Collect 1 observation of achievement