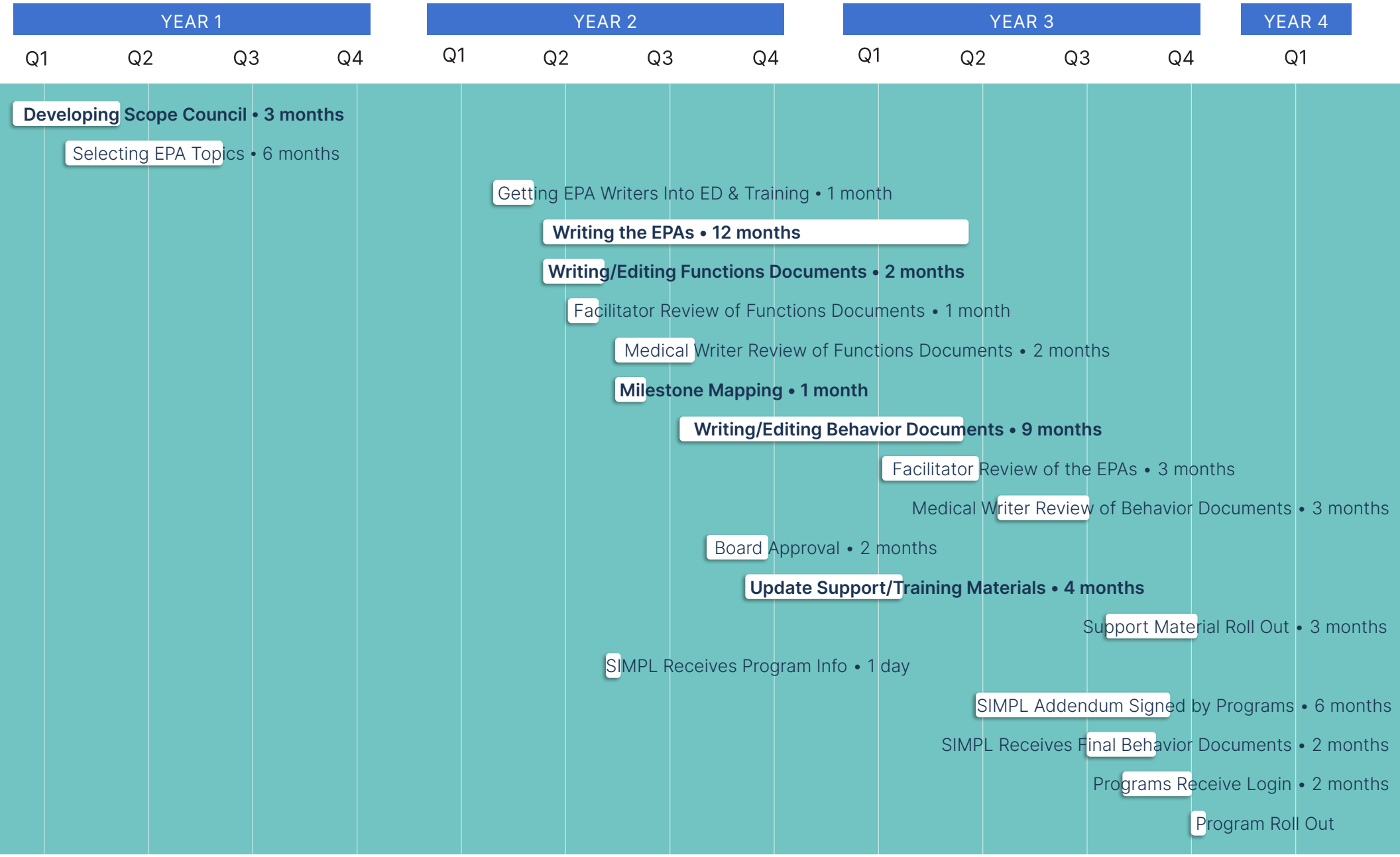
Roadmap to EPA Development



This is a sample timeline for an EPA development cycle, the exact dates may vary.
The focus should be on the duration of each phase versus any specific dates.

THE AMERICAN BOARD OF SURGERY

WHY EPAs?

- **Trust** - Residents are not experts when they graduate but need to be ready to handle common conditions safely and to know when to seek help. EPAs allow us to say residents are ready to enter practice safely and that they can manage common presentations in these 18 core areas of general surgery.
- Ten Cate general conditions for trust - encompass the following principles in assessment strategy:
  - **Ability** – competence, specific associated milestones
  - **Integrity** – benevolence: having favorable intentions, honesty, truthfulness
  - **Reliability** – working conscientiously and showing predictable behavior
  - **Humility** – discernment of own limitations and willingness to ask for help
- What challenges can EPAs help us solve?
  - Dissatisfaction with assessment systems being used
  - Competency frameworks to date feel artificial
  - Need for a transparent assessment framework, focused on autonomy for various stakeholders including the public
- EPAs:
  - Define a discrete element of surgical care that assessors can relate to and evaluate
  - Milestones are incorporated into the EPAs, but faculty do not need to know about individual milestones
  - EPAs start with the end in mind – what should every graduating surgical resident or fellow be able to do safely and independently – this is the floor for all graduates
  - Provide a frequent microassessment format for entrustment decisions to be made and feedback to be offered

Developing a Scope Council

- Groups involved in creating EPAs:
  - **Oversight or owner of the process**
    - EPA Advisory Council (group from various backgrounds including ACGME, surgical educators, surgical practice, board members, etc. to keep us on track), specialty board
    - Primary Reactor Group – help make sure you're getting it right, people on the outside to reality check your EPA choices and to ensure work is on track
  - **EPA Scope Group**
    - EPA Scope Council or specialty board to represent stakeholders within your discipline
      - People who care about the product – you'll need their input as you select EPA topics
      - Involve the people who will be impacted on the ground floor and who will make sure you pick the correct activities
    - Should function as reactor group to your writing group
  - **EPA Writing Group**
    - EPA Scope Groups and writers aren't necessarily the same group
    - Frontline educators and trainees – get participants who will be owners of the outcome, this group will become advocates and help build support
- **Scope Group defines core, final set of EPAs**
- This group will be the Reactor Panel for the EPAs from the writing group product (each group has a task, then when they pass their task off they function as a reactor for the next group)
- General Surgery Scope Council was comprised of 13 representatives and 2 leaders, including GSB, other boards within ABS, Fellowship council, APDS, RRC, ABCRS (diverse group, included some with Canadian experience, practicing surgeons, other EPA writing experience)
- Establish EPA guiding principles early
  - Important that Scope Council understands principles before beginning – these will be foundational for entire project
  - Principles will guide questions and issues that may arise during the process and can help answer stakeholder questions
  - Principles for Scope Council Guidance:
    - Individual resident is the unit of assessment
    - Milestones and EPAs are complementary
    - Purpose is to define core elements of specialty
    - All candidates for certification must be assessable on all included activites and at all accredited sites
    - Entrustment is to be based on frequent formative microassessment
    - Over time, this model may replace some current elements of certification
    - EPAs will complement other materials, such as case logs
    - The final suite should reflect the ABS's (and specifically the specialty board's) definition of the specialty

Defining and Writing EPAs

EPA Writing Steps:

1. Selection of EPAs – engage Scope Council, define principles, know your data
2. Draft EPA Descriptions & Learner Functions – essential functions of the learner, determine phases of care
3. Engage Reactor Panel
4. Map to Milestones – identify target number, thematic representation across EPA set
5. Develop Cognitive Framework – descriptions of entrustment levels, phases of care themes
6. Write Expected Behaviors – description of trainee at each entrustment level, define and follow principles
7. Behavior Harmonization – progression through entrustment levels and across sub-competencies for each level
8. Final Editing & Publication – engage medical writer

After Scope Council is developed:

- Get to know your specialty's data – data defines the EPA set – Dr. Sarosi says, "experts define what's important, data defines what's practical"
    - Case logs, milestones, specialty definitions, EPA sets from adjacent specialties and countries, and societal needs (what are things that are unique to this specialty)
    - EPAs are a tool that provides a lens to visualize the domains of competence and sub-competencies
        - Converts the language of a frontline surgeon into documentation of performance
- Generate initial lists – each Scope Council member generated 25-40 EPAs after reviewing data (based on work of Ten Cate – a very focused specialty may only need 8-15)
- Narrow lists using modified Delphi method – rank lists within results shared between rounds
    - From 79 at the start – each person picked top 20, which narrowed our list to 37
    - Repeated this process by rating EPAs on the strength of each and necessity for the EPA set – 3 rounds of voting resulted in 3 sets:
        - 14 EPAs had high confidence, meaning >80% of Scope Council thought these belonged in the set
        - 5 EPAs that >50% thought belonged in the set, "moderate"
        - 5 EPAs that <50% thought belonged in the set, "low"
    - Reviewed remaining 23 EPAs with Reactor Panel and kept the 19 high and moderate confidence EPAs
    - Define EPAs for the writers – writers need more than EPA titles, what did the Scope Council mean?
    - For each EPA, define: in-scope and out-of-scope diagnoses, in-scope and out-of-scope procedures, and special populations that should be targeted specially for evaluation

Defining and Writing EPAs (cont.)

within a specific EPA (e.g., pediatric patients, pregnant patients)

Lessons learned from scoping process:

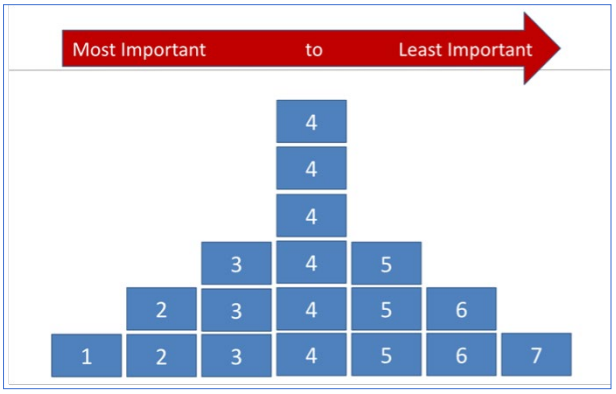
- Zoom worked well for early phases but in-person sessions may help with efficiency later in process
- Prepare for this process to take 6-12 months
- Consider if you will ground your EPAs in diagnosis or presentation (our initial list was about 50/50, we concluded diagnosis because it's unambiguous in case initial presentation turns out to be a different diagnosis than EPA)
- Choosing list of EPAs is easier than defining
- EPA principles kept us on track – stick to the principles developed early on
- Separate reactor group is key – public could be helpful here to reflect and review final product

Writing EPA Functions Documents

- Draft **EPA Descriptions and Functions**
  - Start by describing the activity, keep it brief
  - What are the essential functions of the activity, what creates entrustment (what must they do for the evaluator to say this resident knows how to complete this task), and what is included/excluded in the activity?
    - It's often helpful, but not required, to specify the setting in which the activity may occur
  - Are there phases of care?
    - Surgery disease-specific EPAs typically have three phases: pre-operative, intra-operative, post-operative
  - EPAs should be evidence-based but are not a curriculum
    - Target keeping the behaviors high-level so that the documents won't need to be rewritten every time there is a change in guidelines
  - Behaviors are the assessment tool, **EPAs are the task**
- **Activity Description** - why should this activity be included?
  - How common is it?
  - What settings will practitioners encounter patients?
  - What patient populations?
  - Summarize the essential function of this activity
- **Essential Functions** - what does the learner need to do to complete this task across all phases of care defined for any EPA?
  - Diagnosis, management, follow-up, potential complications
  - Use broad language rather than specific behaviors because this is the task (you will dive into the granular behaviors for each EPA later)
- **Inclusion/Exclusion Criteria** (guided by the Scope Council)
  - Essential conditions for this EPA to be evaluated in versus related conditions that are less common (so the EPA should not be used to evaluate)
- Avoid confusion and re-work by having people write specific functions for each phase of care rather than writing all functions and later dividing them
- EPAs were shared with Reactor Panel of experts from stakeholders who supplied the writing group for feedback
  - Flexibility is key – be willing to adjust and make improvements based on feedback
  - In general surgery, the Reactor Panel said operative details didn't have enough attention, so descriptions were revised
    - Want to include sufficient detail to make it specific for that condition or set of operations

Milestone Mapping

- Each EPA was mapped to 5-7 sub-competencies essential to performance
- Q-Sort is a mixed qualitative/quantitative methodology to set prioritization and provide a visual of the process
- Pyramidal structure prioritizing most important to least important
    - Start from either end - most important or least important, as these are typically easiest to delineate, then work toward middle of pyramid
    - Result will be top 6 in columns 1-3
    - Keep milestone grid defining what sub-competencies are handy to refer to
    - Have all groups report this back, and final set of 5-7 milestones mapped to that EPA will come from the majority votes of all of the participant groups
        - Disagreements should be vetted amongst the entire group
        - Flexibility here is also key, and the mapped milestones can be revisited over time, particularly if there is a perceived gap in needed behaviors as those are being written



- Milestone language for sub-competencies chosen as behaviors are written to help create impactful links to the milestones in the EPA behavior language
- Revisit the essential functions to ensure all mapped milestones are included in learner functions, then add/edit as needed

Writing Behaviors

- General cognitive frameworks for behaviors throughout 4 levels of entrustment during pre-op, intra-op, and post-op phases
- Specific framework tying behaviors to each level of entrustment to avoid variability
- Behaviors should flow from the essential functions, and should NOT be simply a reiteration of the milestones
- Define the expected behaviors for the EPA at each entrustment level
- Write what can be observed. Tips:
    - Try to avoid adjectives such as 'appropriate, beneficial, optimal' as they can be problematic and unspecific, use 'guideline-adherent' or 'evidence-based' as alternatives
    - Use single-encounter language – avoid 'usually' or 'often' unless it's a behavior that will happen repeatedly throughout an activity ('usually coordinated with two hands during the operation' vs 'usually gathers a comprehensive history' – the latter would need multiple patients to be assessed)
    - Incorporate DEI themes and cultural humility
- Each writing group selects key milestone elements from the mapped sub-competencies
- Begin writing with level 4, follow with level 1 to serve as the "bookends" then move on to levels 2 and 3 to calibrate behaviors – going in order can create challenges in the end goal of being "practice ready"
- Facilitators can review writers' work during process to ensure harmonization across the EPAs and save time at the end
- Keep in mind:
    - There should be a behavior for every milestone at every entrustment level – if this isn't the case, mapping may need to be altered
    - Determine which phase the behavior falls in and keep the mapping to each behavior you write
    - Be as succinct as possible to easily convert to the ABS EPA App
    - It's important to complete functions to behaviors then relate to mapping milestones
- The writing process is the hardest, longest part and can take more time than you expect
- Enlisting the help of a medical writer is key – they provide a fresh set of eyes and can streamline the language across the EPA set
- Schedule behavior writing at the beginning of an EPA-focused meeting to capitalize on energy and mental bandwidth

Writing Behavior (cont.)

- Suggested guidelines for writing behaviors (post-Milestone Mapping):
  1. Write the behaviors for each level of entrustment and each phase in bullet points
  2. Read the milestone behaviors and try to convey the intended milestone behavior tailored to the EPA they are covering (don't just copy milestone language), and indicate the milestone behavior and level behind the bullet point as they write it, e.g. (MK2)
  3. You do not need to capture all milestones mapped for all phases – e.g., some milestones will be included in pre-op phase only, some in intra-op, some in post-op while others may carry through multiple phases
  4. If you include a milestone behavior for a phase of care in your behaviors, it must vertically carry through with progressive milestone behaviors at all entrustment levels for that phase of care (e.g., you can't include a milestone behavior for E1 but not E3 for the pre-operative phase of care – no skipping)
  5. You cannot list a milestone with different levels within one entrustment level – e.g., E2 cannot have MK1-L2 and MK1-L3 as that will disrupt the downstream analytics. E2 can only be mapped to MK1-L2 OR MK1-L3
  6. Teams should write according to their EPA with above rules. Then, prior to placing into the giant spreadsheet by EPA and milestone for the across and down review by facilitators, the facilitators should review individual EPAs to ensure the above rules were followed
  7. Divide into vertical and horizontal readers to identify alignment – if above rules are followed, the degree of writing and rework should be significantly less

Training Materials

- **EPA Project Ecosystem**
- **FAQs About EPAs**
- **Implementation Checklists**
- **EPA Grand Rounds Presentation Slides**
- **Use EPAs to Support a Struggling Resident**
- **Use EPAs to Take Charge of Your Surgical Training**
- **How to Use ABS EPA App**