REVERSE RESEARCH TIMELINE FOR RESIDENT PUBLICATIONS:
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Key Points
- ACVS residents frequently struggle to fulfill research publication requirements in time for credentials applications at the end of residency year 3
- A Reverse Research Timeline encourages realistic budgeting of the time required and breaks a complex process into multiple, achievable goals
- Backward planning not only improves outcomes, it has been shown to have a positive motivational effect and to relieve stress

The ACVS has long held a publication requirement for individuals at the time of credentials application. The publication must describe a hypothesis driven research study or retrospective study with a clearly stated objective. Case reports are not considered acceptable. Many residents fail to realize the time required for both completion of the research and for the review process by a scientific journal. Reverse timelines can be useful when planning the completion of complex tasks, particularly when individuals have other, simultaneous clinical and educational responsibilities. An example of the process of reverse planning is outlined below for typical research studies performed in ACVS residencies in an effort to help trainees and mentors in meeting publication requirements during the 3 year residency period.

Example:

Start at end goal: Publication acceptance due by Aug 1st, year 3.

1) Time between submission and acceptance to the Journal:

While turnaround time is 45 days, there are typically multiple revisions and average time from submission to acceptance is approximately 200 days for Vet Surg. Allowing for some room for error, submit by 240 days before, which would require submission in November (Fall, year 3)

2) Time for data analysis and manuscript preparation:

Manuscript writing and revisions (2months), start by September of year 3

Data analysis and statistics (2 months), start by July of year 2

3) Time for data acquisition:

Retrospective study, 3 months, start by April of year 2

Prospective (benchtop) study, 6-12 months, start by July of year 1 to Dec of year 2

4) Time for study planning and grant application:

Retrospective study planning without need for funding, 3 months, start by January of Year 2 (1.5 years into program)
Prospective study planning with need for funding, 6-12 months,  *start by July of year 1 (day 1 of program)*

As you can see, ACVS surgery residency publication requirements leave a very narrow window for successful completion of the work if it is begun and completed during the span of a traditional 3-year program. Performing prospective, benchtop studies involving a new model will likely require initiation of the effort of day 1 of the residency with constant attention to progress throughout. A retrospective study can be performed in less time, but will also require a minimum of 1.5 years from concept to acceptance of publication. Research studies rarely occur without mishaps or changes in direction, so these timelines must be considered “best-case scenarios”. Using a reverse planning approach has been shown to reduce stress and to improve motivation for complex processes, by allowing the individual to picture the completion of the end goal (publication) and then to work backward to current reality in order to adequately envision the steps required (see Figure 1 from Park, *et al*).

![Diagram of Order of Planning, Perceived Clarity of Plan, and Downstream Effects]


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