

Forum for Early Career Clinical Investigation New Section for *Circulation: Heart Failure*

We are launching a new section in *Circulation: Heart Failure* that will be devoted to publishing primary clinical research conceived and performed by early career investigators during training or during the first 3 years on faculty. This research should be performed by the primary author or in some cases an investigative cohort of authors, beginning with the initial articulation of a relevant question, through development of a strategy to address it, the personal collection of the primary data, analysis with rigorous statistical guidance as needed, and thorough interpretation of the results, limitations, and implications. Hypothesis-driven research is ideal, but reasonable questions for these exercises might also be “What are the reasons given by clinicians in a heart failure clinic for their patients being on lower than target doses of β -blockers?” or “How many and which patients have oscillatory breathing patterns while awake?” We would consider publication even without a clear answer to support or refute a hypothesis, if the question and strategy were appropriate and the data and limitations were cogently analyzed.

Novelty of the question and the results will be less critical in the evaluation of these manuscripts than for those submitted through the standard journal review process. However, authors are expected to demonstrate familiarity with previous studies to describe how their population or strategy differs, and how their results either confirm or challenge what is already known. Although traditionally seminal research is more likely to be published in other sections of the journal, we recognize that some key contributions to current science were often not initially recognized as such, and might first appear here. Articulation of good questions with characterization of the relevant population also serves to inspire and guide future broader research initiatives.

It is anticipated but not essential that a mentor or mentors provide guidance about the relevance and context of the question, the feasibility of the project, the conduct of ethical research, and the analysis of the results. However, the priority will be given to those submissions that most clearly represent independent work of the early career author(s), which will often be indicated by mention of the mentor in acknowledgment rather than as an author. The intent of this new section is to encourage early investigators to practice independent scrutiny of the clinical material that surrounds them and to perceive questions that should be asked.

We hope that this new section will increase the incentive for vigorous individual exercise in clinical investigation by improving the chance of publication, which can be daunting by the usual route. We would hope that senior investigators would encourage their mentees to take this opportunity, without yielding to the temptation to assign them to a project already identified within the mature research enterprise.

Training for the Future

Current research experiences for trainees often involve reanalyses of large databases they did not help to create, to answer questions they did not pose. Often these analyses are inspired not by what questions should be answered, but by what questions can be addressed from banked trial data, in the *Jeopardy!* format of answers in search of questions. These circumscribed projects are convenient because they can be sandwiched between the increasing clinical training requirements. They can strengthen skills of analysis, literature review, cogent writing, and organizational collaboration. However, they do not train how to perceive the vital questions, define patient cohorts, design data collection forms, and circumvent the obstacles of performing the investigation. They do not teach lessons such as described by Dr Braunwald: The best way to decrease the incidence of a condition is to start a trial to study it, or the National Heart, Lung, and Blood Institute Heart Failure Apprentice Network: Sometimes what arises as an apparent problem is actually part of the answer.

Many of the senior mentors in clinical heart failure investigation began their academic careers in an environment of Little Data, before heart failure was recognized as a specialty. Experiments in intervention could often be completed in 1 center. Systematic prospective collection of patient characteristics and outcomes in single busy centers launched many careers. Although that era is closed, new clinical frontiers are opening up as new therapies come into practice and themselves

create new heart failure diagnoses, such as right heart failure with ventricular assist devices, and heart failure with better ejection fraction.

The future will probably not hold many more positions for professional clinical trialists. At the basic level, discoveries in the -omics will require thoughtful translation into clinical applications. At the same time, new linking of national health information and social media technology promise Big Data with infinite results, hidden in which there will be some answers. The use and limitations of these massive analyses will require highly disciplined interpretation by clinicians who understand how care is delivered and reported, and who truly appreciate the potential depth of unmeasured confounding. At the same time, using newer technology to measure and integrate objective information about patient-centered outcomes beyond survival and hospitalization, such as activity level and social interaction, will support the new focus on shared decision making.

Most academic clinicians will be earning their salaries based on clinical, administrative, and educational contributions. Protected time has long been a mirage, but will vanish further, as physicians caring for patients will rarely be able to maintain both their clinical expertise and competitive edge for research funding. However, the exercises in clinical investigation are more vital than ever for the survival and success of the clinical and academic missions. Appreciation of the fundamental process of inquiry is crucial to provide the filter and focus for the impending flood of information. We hope to foster these skills for those to whom we will soon entrust the care of our patients and the training of our successors.

The submission process for articles intended for the Forum for Early Career Clinical Investigation section can be found in the journal's Instructions for Authors section. We look forward to receiving your submissions and to working with you in these exercises.

Lynne Warner Stevenson, MD
James E. Udelson, MD
Editors
Circulation: Heart Failure