

# Longitudinal studies provide an excellent research learning environment for trainees

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Compared to experimental studies that require complex infrastructures such as laboratories or clinical trials at multiple centers, studies using a longitudinal cohort (an observational research method in which data is gathered for the same participants repeatedly over a period of time) could be a good alternative for investigators as they begin their early research careers.

"The Framingham Heart Study (FHS) is an excellent example of a database to initiate investigations and generate questions that could be followed later by experimental studies," explains Hugo J. Aparicio, MD, MPH, assistant professor of neurology at Boston University School of Medicine, in a perspective article in the journal *Stroke*.

Funded by the National Heart, Lung and Blood Institute of the National Institutes of Health, FHS began in 1948, as a database of thousands of participants from Framingham, Mass., who volunteered and shared their medical and [personal data](#) to advance clinical knowledge. Over the decades, FHS has helped answer key questions related to cardiovascular and neurological diseases. More than 15,000 participants have been included in FHS studies resulting in nearly 3,700 published articles using the data.

According to Aparicio, data from longitudinal cohort studies often contain more detail than administrative datasets, which can result in research with higher quality data that can lead to higher impact publications. In addition, ongoing studies often have well-established

research teams and senior investigators with extensive experience. "Access to high-quality data, mentorship and training in the research process are critical for launching a career in clinical research."

However, he cautions that using longitudinal cohort studies does pose some challenges and limitations, including: the way that data is collected makes interpretation of results critical and requires careful insight; loss to follow up when patients drop out of the studies and the difficulty of analyzing rare conditions caused by limited number of participants compared to the total general population.

Regardless, Aparicio hopes his perspective article stimulates early career investigators to take advantage of these resources. "Beyond opportunities to publish, joining a research team at a cohort study can open doors for mentorship, expand research skills and help focus and refine your research path."

Provided by Boston University School of Medicine

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