

# Evaluation of Longitudinal EKG/Radiograph Curriculum At Waco Family Medicine

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### Introduction

At WFM residency, our ECG and radiology training is very dependent on what attending you have on your hospital service. Besides hospital services, we don't have any other dedicated ECG and radiology training within our program. This makes it variable as to how much training each resident gets, leading to each having different comfort levels. After a needs assessment was completed, our program felt it was needed to introduce a longitudinal ECG/radiograph training curriculum. There are many examples of the benefits of longitudinal curriculum improving knowledge, accuracy, retention, and application within medical education literature (1,2,3,4).

### Methods

#### Purpose

The purpose of my research study is to evaluate the efficacy of the implementation of a longitudinal ECG and radiographic imaging curriculum in WFM resident confidence and accuracy in reading ECG's/radiographs pre- and post-implementation.

#### Research Question

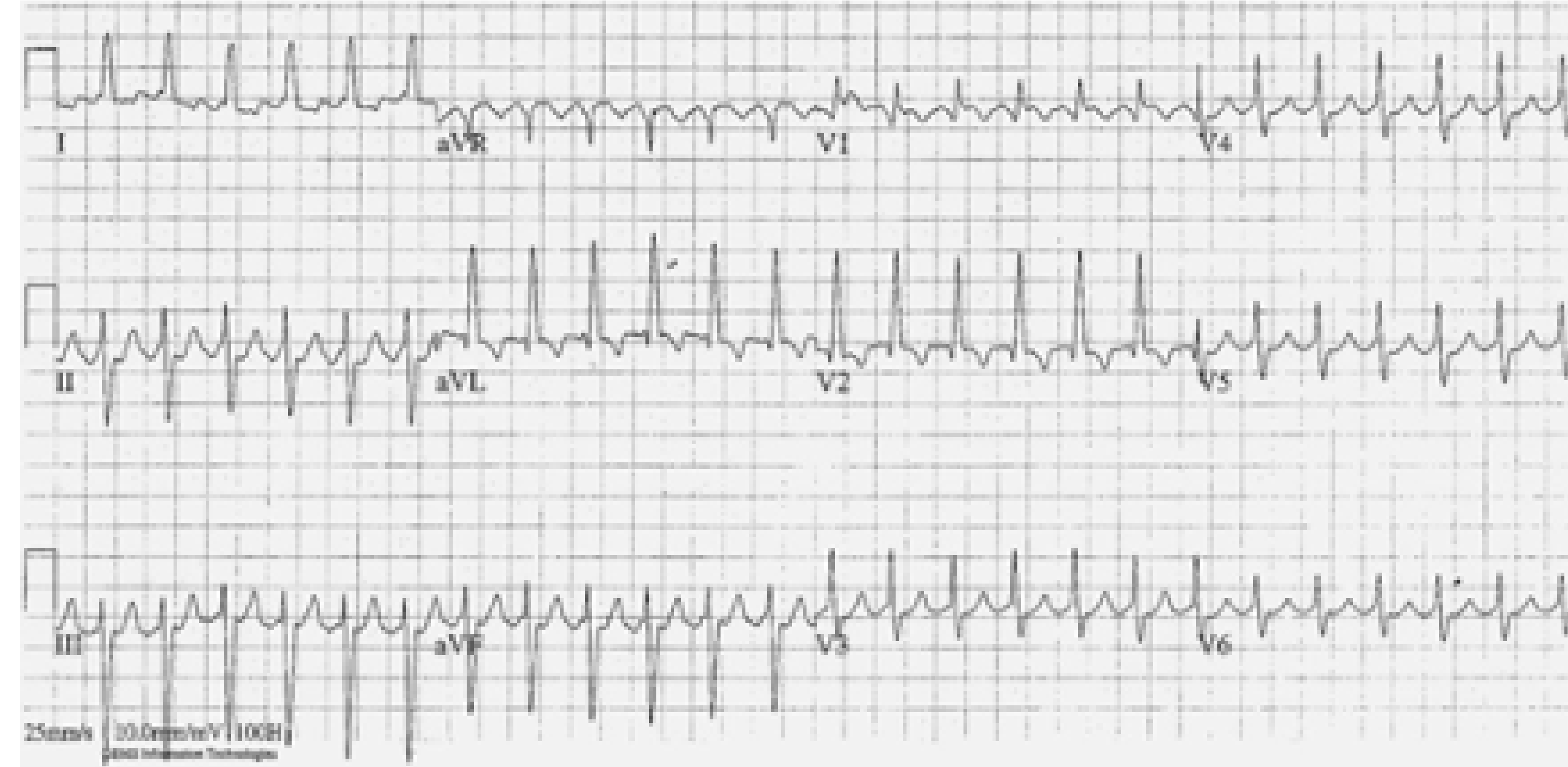
Will longitudinal ECG and radiology training increase WFM residents' accuracy and confidence in their ability to accurately read ECG's and radiographic images?

#### Methodology

- Site: WFM
- Participants: 36 WFM family medicine residents via convenience sampling
- Design: Quantitative
- Data Collection: Quiz/Survey
- Statistical Analysis: Dependent variable T-test

### Pre/Post Quiz

2. What is the rhythm below?



- Atrial fibrillation
- SVT
- Atrial flutter 2:1
- Multifocal atrial tachycardia

3. On the above EKG (question #2), what could you do clinically to differentiate between the different rhythms listed?

Answer:

### Pre/Post Confidence Survey

Confidence Survey

1. How confident do you feel interpreting EKG's/radiographs?

1	2	3	4	5
Not at all confident	Slightly confident	Somewhat confident	Fairly confident	Very confident

2. How confident do you feel making medical decisions for a patient based solely on your own interpretations of EKG's/radiographs?

1	2	3	4	5
Not at all confident	Slightly confident	Somewhat confident	Fairly confident	Very confident

### Timeline

- ❑ The pre-implementation quiz and confidence survey will be sent out in July 2023.
- ❑ The pilot curriculum will then start in July 2023.
- ❑ The curriculum will be preliminarily evaluated by discussions with resident groups and modified as needed.
- ❑ The post-implementation quiz and survey will be completed in December 2023.
- ❑ The statistical analysis will then be run in December 2023.

### Discussion

- ❑ My curriculum is designed specifically for WFM Residents due to a needs assessment within the program finding it to be an area of deficiency within our curriculum.
- ❑ I hope that if there are good results from the evaluation of the curriculum using this research project, it can:
  - ❑ 1) become a more permanent curriculum within our residency and
  - ❑ 2) be a curriculum that can be used by other residency programs as well.
- ❑ There have been many examples of longitudinal programs within medical education making a huge impact for the learner, and the hope is for that to be the case for this curriculum as well.

### References

- ❑ Kelm, D.J., Ratelle, J.T., Azeem, N., Bonnes, S.L., Halvorsen, A.J., Oxentenko, A.S., Bhagra, A. Longitudinal Ultrasound Curriculum Improves Long-Term Retention Among Internal Medicine Residents. *J Grad Med Educ* (2015) 7 (3): 454-457.
- ❑ West, C.P., Jaeger, T.M. & McDonald, F.S. Extended Evaluation of a Longitudinal Medical School Evidence-Based Medicine Curriculum. *J GEN INTERN MED* 26, 611-615 (2011).
- ❑ Reilly JB, Ogdie AR, Von Feldt JM, et al. Teaching about how doctors think: a longitudinal curriculum in cognitive bias and diagnostic error for residents. *BMJ Quality & Safety* 2013;22:1044-1050.
- ❑ Pohl SD, Van Hala S, Ose D, Tingey B, Leiser JP. A Longitudinal Curriculum for Quality Improvement, Leadership Experience, and Scholarship in a Family Medicine Residency Program. *Fam Med*. 2020;52(8):570-575.
- ❑ Salkind, N.J., Frey, B.B. *Statistics for People Who Think They Hate Statistics*. Thousand Oaks, CA, SAGE, 2022.

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