

Title: Implications for ultra-sensitive troponin assays: an investigation of cardiovascular resource utilization.

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Research Project Description: Nearly a million myocardial infarctions (MI) occur every year in the US. Even more commonly, patients are admitted to the hospital for other conditions such as heart failure, atrial fibrillation, or pneumonia and have elevated cardiac biomarkers, such as troponin, but are not suffering a MI. The next generation of ultra-sensitive troponin assays will be approved in the US in the near future. In countries that have adopted ultra-sensitive assays, the demand for cardiovascular services: consults, echocardiograms, stress tests, and coronary angiography, increased dramatically. At present, we do not know what the demand for these services and need to investigate demand before ultra-sensitive troponin assays arrive. This project will investigate the demand for cardiovascular services among patients who had troponin ordered during their hospitalization. Students will assist in data gathering and data entry with the expectation of presenting the research and participating in publishing a manuscript on the results.

#### Selected Readings:

- Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Blaha MJ, et al. Heart disease and stroke statistics--2014 update: a report from the American Heart Association. *Circulation*. 2014;129(3):e28-e292.
- Thygesen K, Alpert JS, Jaffe AS, Simoons ML, Chaitman BR, White HD, et al. Third universal definition of myocardial infarction. *J Am Coll Cardiol*. 2012;60(16):1581-98.
- Zarich S, Bradley K, Seymour J, et al. Impact of Troponin T Determinations on Hospital Resource Utilization and Costs in the Evaluation of Patients With Suspected Myocardial Ischemia. *Am J Cardiol* 2001;88:732-736