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Case series analysis of infection-cardiovascular risk in patients on dialysis with exposure onset error

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3:30pm - 4:30pm, CHS 33-105A
Refreshments served at 3:00 PM in room 51-254 CHS

ABSTRACT:
Cardiovascular disease and infection are major factors for morbidity and mortality in patients on dialysis. Hospitalization data from United States Renal Data System (USRDS) captures nearly all (> 95%) patients with end-stage renal disease in the U.S., the largest source of research data available for this population. Although the precise mechanisms by which infection may affect cardiovascular events are not fully known, infections may affect vascular endothelium, create a chronic sub-clinical inflammatory state that affects atherosclerosis, or may create a procoagulant state. Thus, we hypothesize that the time period following infection are associated with increased cardiovascular event risk. The self-controlled case series, or simply called case series, design/method and analysis of infection-cardiovascular risk in patients on dialysis using USRDS data presents several unique challenges, including (1) the timing of infection (or exposure) onset error since the time of infection is not known precisely, (2) misspecification of risk period, (3) and other inferential challenges, such as formal hypothesis testing. In this talk I will discuss current resolutions /developments for some of these challenges related to case series analysis and open topics in other areas of applications.