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**Friday, November 22, 2024**

**12:00-1:00 pm**

**Biotechnology Center Auditorium  
or via Zoom**

<https://uwmadison.zoom.us/j/97615509019>

### ***Statistical methods for improving post-licensure vaccine safety surveillance***

**Abstract:** Improving statistical methods for post-licensure vaccine safety surveillance is critical for safeguarding public health and maintaining public trust in vaccination programs. This is especially important during pandemics like COVID-19 when vaccines are administered on a global scale at unprecedented speed. Many national vaccine safety surveillance efforts use electronic health records and insurance claims data from large multi-site health care data networks. I will summarize challenges that can arise when using these secondary data sources to conduct safety studies. I will also discuss statistical approaches designed to better detect rare adverse events in these settings. These include 1) adapting sequential methods from clinical trials to this observational database setting in order to ensure more rapid detection and 2) using natural language processing of clinical notes in combination with machine learning methods to improve the accuracy with which vaccine safety outcomes are identified. I will illustrate methods using example safety questions that have arisen within FDA's Sentinel Initiative and the CDC's Vaccine Safety Datalink monitoring systems.



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