

## **Evaluating the Reliability of Electronic Health Record Data for Chronic Diseases**

Diagnosis codes such as International Classification of Diseases (ICD) codes are integral to medical workflow and are powerful tools in clinical decision making and epidemiological research. However, ICD codes entered into the electronic health record (EHR) do not have direct patient input, and therefore may not accurately reflect a patient's perceived health diagnoses, especially for chronic diseases. This study investigates the relationship between patient self-reported and provider-reported chronic disease in a Colorado-based primary care clinic. Specifically, we utilize innovative methods to evaluate the concordance between provider-identified disease recorded in the EHR and patient self-reported disease. We focus on high frequency chronic diseases and reveal that there are individual characteristics that modify the relationship between provider and patient reports. Specifically, age impacts concordance for hypertension, chronic respiratory illness, and depression. Gender impacts the concordance for chronic respiratory illness and depression. These findings have implications for medical workflow, division of resources for impacted patient groups, and EHR based epidemiologic research more broadly.