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Measuring Quantitative Traits of Alcohol Use Disorder in an Integrated Health System

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Background: Alcohol use disorder (AUD) is a common substance use disorder (SUD), with typical onset in young adulthood and a lifetime prevalence of 15.8% for severe AUD in populations of European ancestry. A substantial fraction of AUD risk is genetic in origin and more recent genome-wide association studies (GWAS) studies of larger samples have confirmed SNPs in genes encoding alcohol metabolizing enzymes. However, the discovery of genomic predictors has been somewhat limited due to minimal ascertainment of large samples that include a substantial fraction of individuals with severe AUD.

Methods: We describe an ongoing effort to characterize quantitative estimates of alcohol use in patients that are part of Geisinger, an integrated healthcare system. We report data from 680 patients who completed the AUDIT screener via patient portal.

Results: 71% of patients that responded report using alcohol. Of those that use alcohol, 25% were at some risk of AUD based on AUDIT scores. A majority of patients (59%) requested that their AUDIT scores be forwarded to their physicians, indicating clinical utility for implementation of screeners via this mechanism.

Conclusion: Overall, these results suggest that use of patient portal messaging for SUD screeners may be a productive method for acquiring quantitative SUD data on individual patients. This method is amenable to scaling and may be useful for implementing high throughput screening of patients that also have genomic data.