

## POSTER ABSTRACTS

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#### Laboratory Monitoring of High Risk Drugs at Initiation of Therapy in Ambulatory Care

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**Background:** Laboratory monitoring for organ dysfunction related to selected drugs is important, but research on monitoring adherence is limited. The current study was undertaken to assess laboratory monitoring among ambulatory patients receiving medications for which baseline laboratory monitoring is recommended.

**Methods:** We conducted a descriptive retrospective study of baseline laboratory monitoring among new users of medications designated as high risk drugs with laboratory monitoring (HRDLM)(n = 36 drugs and drug classes). The study population included 2,000,000 individuals, comprised of 200,000 randomly selected members from each of 10 HMOs participating in the HMO Research Network CERT. Laboratory monitoring errors were defined as failure to perform all indicated laboratory monitoring up to 180 days before or 14 days after the index dispensing of a HRDLM.

**Results:** The overall percentage of index drug dispensings without laboratory monitoring was 38.6% (107,791 of 279,418 dispensings; range = 29.3% – 46.1%). Examples included not obtaining serum creatinine and potassium in 39.2% of patients being starting on an angiotensin converting enzyme inhibitor and not monitoring liver and thyroid function in 57.2% of patients having amiodarone initiated. When monitoring was conducted, 59.7% of monitoring occurred within 14 days before or after drug dispensing. Individuals without laboratory monitoring were younger (median 57 versus 61 years;  $p < 0.001$ ) and had fewer chronic diseases (3 versus 4;  $p < 0.001$ ) than individuals who had laboratory monitoring.

**Conclusions:** This study documents that recommended baseline laboratory test monitoring is not conducted for a substantial proportion of patients taking high-risk drugs. Older individuals and patients with more chronic illnesses are more likely to be monitored. This research enhances our understanding of patterns of laboratory monitoring associated with high-risk drug therapy and informs future efforts to intervene to improve patient safety. Future research will examine the relationship between laboratory monitoring and clinical outcomes.