Texas 2009 Medical Monitoring Project: Antiretroviral data reliability and source agreement

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Introduction

• The Medical Monitoring Project (MMP) is a nationwide surveillance project that assesses the unmet needs and quality of health services among HIV(+) persons receiving care.

• 2009 MMP data for Texas was collected from both medical records and from patient interviews at 29 facilities across the State, excluding Houston, which is a separate MMP site.

• The 2009 Texas data was 76% male, 23% female, and 1% transgendered; 40% described their race/ethnicity as White, 27% as African American, 26% as Hispanic, and 2% as Asian, Native American, or Multiracial.

• This analysis used the 2009 Texas MMP data on antiretroviral (ART) usage to assess agreement between the interviews and medical records.

Results

• 69.5% of the linked records had completely concordant data for ‘Currently Taking’ ART status and 34.3% were completely concordant for ‘Ever Taken’ ART status.

• Average percent agreement was 98.2% for ‘Currently Taking’ status and 90.5% for ‘Ever Taken’, which had a significant mean difference of 6.9% (95% CI for the mean: 4.63% – 9.2%, p<0.0001).

• ‘Currently Taking’ ART status had a mean adjusted Kappa value of 0.961, a median of 0.976, and a standard deviation of 0.042. ‘Ever Taken’ ART status had a mean adjusted Kappa value of 0.810, a median of 0.805, and a standard deviation of 0.121.

• Adjusted Kappa values for ‘Currently Taking’ ART status were high, with low variation, indicating a strong level of agreement between the sources, whereas values for ‘Ever Taken’ had a wider distribution and were significantly lower, though agreement was still relatively high, based on the standard Landis and Koch scale.

Conclusion

• High reliability between patient-reported and medical record ART usage was observed, particularly for current ART usage.

• Concordance analyses of patient-reported medication usage have generally associated accurate recall with extended usage; however, in the 2009 Texas MMP data, greater concordance was observed for more-recently prescribed ARTs.

• The observed outcome is likely due to the special nature of HIV clinical management, which can include frequent changes in medication regimens over many years of treatment.

• Linking data from multiple event records per individual (e.g., clinical visits over time) to a single record per individual provides an opportunity for retrospective analysis of MMP data.

• A high level of data reliability can be expected in national and local studies involving MMP data for ART usage.