

# Variance Estimation in Complex Surveys

Drew Hardin

Kinfemichael Gedif

# So far..

- Variance for estimated mean and total under
  - SRS, Stratified, Cluster (single, multi-stage), etc.
- Variance for estimating a ratio of two means under
  - SRS (we used linearization method)

# What about other cases?

- Variance for estimators that are not linear combinations of means and totals
  - Ratios
- Variance for estimating other statistic from complex surveys
  - Median, quantiles, functions of EMF, etc.
- Other approaches are necessary