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**Improved doubly robust estimation when data are monotonely coarsened, with application to longitudinal studies with dropout.** (English) Zbl 1217.62146

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**Summary:** A routine challenge is that of making inference on parameters in a statistical model of interest from longitudinal data subject to dropout, which are a special case of the more general setting of monotonely coarsened data. Considerable recent attention has focused on doubly robust (DR) estimators, which in this context involve positing models for both the missingness (more generally, coarsening) mechanism and aspects of the distribution of the full data, that have the appealing property of yielding consistent inferences if only one of these models is correctly specified. DR estimators have been criticized for potentially disastrous performance when both of these models are even only mildly misspecified. We propose a DR estimator applicable in general monotone coarsening problems that achieves comparable or improved performance relative to existing DR methods, which we demonstrate via simulation studies and by application to data from an AIDS clinical trial.

**MSC:**

[62N02](#) Estimation in survival analysis and censored data

[62P10](#) Applications of statistics to biology and medical sciences; meta analysis

[62G35](#) Nonparametric robustness

[65C60](#) Computational problems in statistics (MSC2010)

Cited in **9** Documents

**Keywords:**

[coarsening at random](#); [discrete hazard](#); [missing at random](#)

**Software:**

[SAS](#); [SAS/STAT](#)

**Full Text:** [DOI](#)

**References:**

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