

ROBUST ESTIMATION OF MARGINAL REGRESSION PARAMETERS IN CLUSTERED DATA

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We develop robust methods for analyzing clustered data where estimation of marginal regression parameters is of interest. Inverse cluster size reweighting in the objective function to be minimized is incorporated to handle the issue of informative cluster size. Performance of the resulting estimators is studied by simulation. Large sample inference and variance estimation is carried out. The methodology is illustrated using a periodontal disease dataset.

Keywords: Informative cluster size, random cluster size, R estimator, dental data