

Submission for the 2022 IAOS Prize for Young Statisticians

Predicting the quality and evaluating the use of administrative data for the 2021 Canadian Census of Population

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Abstract

This paper presents the statistical contingency plan for the 2021 Canadian Census of Population, developed in response to the COVID-19 pandemic, wherein administrative data was to impute non-responding households in areas with a low response rate and where the administrative data were of sufficient quality. We describe the modeling approach for predicting the quality of data available for administrative households, including important extensions to existing approaches. As well, we provide a framework for evaluating direct imputation using administrative data, relative to traditional donor imputation, in the absence of a simulation study. We conclude by discussing the evaluation using preliminary data and subsequent implementation for the 2021 Canadian Census of Population.