REJOINDER: "SPATIAL ACCESSIBILITY OF PEDIATRIC PRIMARY HEALTHCARE: MEASUREMENT AND INFERENCE"

BY MALLORY NOBLES, NICOLETA SERBAN AND JULIE SWANN

Georgia Institute of Technology

We first would like to thank all discussants for their thoughtful comments. We appreciate the additional insights regarding our findings and the suggestions on future directions relevant to the estimation of and inference on healthcare access. In our rejoinder, we emphasize three discussion threads addressing challenges and limitations of the proposed methodology, and addressing further considerations in the interpretation of our models with implications in informed decision making.

Local estimates and targeted interventions. In recent years, the fields of healthcare services research and health policy have acknowledged and stressed the significance of applying operations research methodology to understand and manage the complexity of healthcare [Rouse and Serban (2014)]. The methodology can emphasize impact and improvements at different levels—individuals, communities, processes, providers, organizations and/or the entire ecosystem of care. Depending on what actions are targeted in improving healthcare delivery, one may assess individual-level improvements (e.g., personalized medicine) or system-wide effects (e.g., health policy), for example. Our study primarily emphasizes health policy, while not losing sight of its potential unintended consequences at the community level. In policy decision making, low geographic granularity inferences, block or census tracts, are desirable over coarser geographic aggregations such as county because they will capture the diversity of populations in need of better care and the diversity of environments of care delivery.

Making inferences at low geographic granularity, specifically local assessments of systematic disparities, is not a new research direction in the medical literature, although one will find novel modeling contributions in recent years with the advancement of computational approaches in the area of geographic economics and environmental studies.

An immediate application of local disparity inferences is suggesting targeted actions to improve various aspects of healthcare. We divide such actions into policy and network interventions. For example, in the discussion paper, we primarily focus on *policy interventions*, which commonly involve designing, implementing or translating a health policy. On the other hand, *network interventions* refer to actions that involve altering an existing network of care, including location and allocation of sites. Designing and evaluating such interventions require understanding healthcare access and its impact on health outcomes at the community level along with

---

Received August 2014.