BIOSTATISTICS SEMINAR

HEALTH ANALYSIS IN ACTION: INFLUENCING ORAL HEALTH POLICY FOR IMPROVING ACCESS TO DENTAL CARE

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Abstract:
I will begin this seminar my motivating research on access to dental care in the context of oral health policy, with a recent, highly debated policy in Georgia as a illustration. Towards informed policy and decision making, the research presented in this seminar sheds light into recent access estimates by the Health Policy Institute (HPI) of American Dental Association, with a focus on rigor of data and methodology for improving access estimation and inference. I will introduce and access estimation approach, which relies on mathematical optimization modeling, where supply of and need for dental care ‘matched’ using a system approach, accounting for preferences and constraints in the system. The access estimates from this model point to significant disparities of dental care, in constraints in the system. The access estimates from this model point to significant disparities in dental care, in contrast to those provided by the HPI of the American Dental Association. The modeling approach also allows for inferences on ‘what-if-policy-scenarios’, illustrating the impact of popular programs. However, access modeling approaches provide estimates of access without quantification of the uncertainty in the estimates. I will end the talk with a theoretically-based framework on solving a large number of linear programs given a sample of the uncertain model inputs, which I turn can be used to quantify the uncertainty in the access estimates derived the optimization approach.

The Johns Hopkins Bloomberg School of Public Health, Department of Biostatistics

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