

BIOSTATISTICS SEMINAR



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Small Area Estimation in Low- and Middle-Income Countries

The under-five mortality rate (U5MR) is a key barometer of the health of a nation. Unfortunately, many people living in low- and middle-income countries are not covered by civil registration systems. This makes estimation of the U5MR, particularly at the subnational level, difficult. In this talk, I will describe models that have been developed to produce the official United Nations (UN) subnational U5MR estimates in 22 countries. Estimation is based on household surveys, which use stratified, two-stage cluster sampling. I will describe a range of area- and unit-level models and describe the rationale for the modeling we carry out. Data sparsity in time and space is a key challenge, and smoothing models are vital. I will discuss the advantages and disadvantages of discrete and continuous spatial models, in the context of estimation at the scale at which health interventions are made. Other issues that will be touched upon include: design-based versus model-based inference; the inclusion of so-called indirect (summary birth history) data; reproducibility through software availability; benchmarking; how to deal with incomplete geographical data; and working with the UN to produce estimates.

Thursday April 22, 2021

3:30 pm - 4:30 pm

Zoom meeting: Please also find a link in the email invite, with the password.
<https://uncsph.zoom.us/j/95116832073?pwd=TnV4QUtGLzMwaFRBTlRsd2xmTjVMQT09>



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