Summary of University of Washington/Fred Hutch Biostatistics/Statistics Research Activities

Related to COVID-19 / SARS-CoV-2

April 3, 2020

Resources (papers, slide decks from faculty/students) are posted at the Infectious Disease Prevention Research via Innovative Statistical Methods (ID-PRISM) website http://fredhutch.org/id-prism

Table 1. Ongoing COVID-19 Biostatistics/Statistics Research as of April 3, 2020

Research Activity	Faculty and Students (Alphabetical Order)
All clinical trials networks for any disease area (impacts of COVID-19 on clinical trial implementation, monitoring, ability to meet research objectives, analysis plan, etc.)	Dozens of faculty and students
COVID-19 / SARS-CoV-2 vaccine efficacy trial design and statistical methods	Several faculty members and students
Modeling of effectiveness of physical distancing interventions	Laura Arbetman Matrajt, Tiffany Leung (manuscript submitted)
Phase 1 clinical trials of vaccines	Elizabeth Brown, head of the Statistics and Data Sciences Unit of the Infectious Diseases Clinical Research Consortium (IDCRC)
Post-Exposure Prophylaxis (PEP) Adaptive trial with household-based randomization	Elizabeth Brown, study statistician BMGF-sponsored UW study
Phase 3 adaptive platform COVID-19 treatment trial	Elizabeth Brown, study statistician BMGF-sponsored UW study
Statistical methods in survival analysis: Applications include clustered COVID-19 failure times, SARS-CoV-2 incubation period, double-censored failure time data	Gary Chan, Fei Gao, Kendrick Li, Andrew Zhou
Analysis of the early epidemic in China	Ying Qing Chen, Yifan Zhu
Statistical methods for COVID-19 (R21 proposal)	Ying Qing Chen
Task Force: Biostatistics and data management principles and planning related to the COVID-19 pandemic (e.g., EMA and FDA guidelines on how general clinical research accommodation of COVID-19)	Deborah Donnell
Models of Infectious Diseases Agent Study (MIDAS) grant supplement for COVID-19 research	Paul Edlefsen with Joshua Herbeck at UW Global Health
Quantification of SARS-Cov-2 viral load and diagnostics assays based on UW virology lab data	Leigh Fisher, Youyi Fong
World Health Organization Core Protocol for Preventive Vaccine Efficacy Trials	Tom Fleming, Peter Gilbert, Betz Halloran, Yunda Huang, Holly Janes

World Health Organization Research & Development Working Group	Tom Fleming, Betz Halloran (Dean et al., NEJM, 2020, on the Core Protocol concept)
World Health Organization Master/Core Protocol for Therapeutics Efficacy Trials	Tom Fleming, Betz Halloran
Association of alpha blockers with reduced severity of COVID-19 symptoms	Raphael Gottardo
Population-based assessment of epidemic spread, intervention and mobility effects, policy, advisory panels, social distancing	Betz Halloran
Seattle Coronavirus Assessment Network (SCAN) COVID-19 (Adaptation of Seattle Flu Study)	Jim Hughes, study statistician Barbra Richardson, DSMB statistician
Characterizing SARS-CoV-2 diagnostic testing demographics in Seattle	Sue Li
Risk assessment of accelerated pulmonary comorbidity following SARS-CoV-2 infection using host immune genetic polymorphisms	Lue Ping Zhao (with Dan Geraghty Fred Hutch lab)