

Commented Summary of a Year of Work in Covid-19 Statistical Modeling

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Classification of the Material:

Background:

Formal Proposal for Retired Research Community
An illustrative Numerical Example and UTube video
Previous Experiences in Epidemiology (Zika and Ebola)

Data Analysis:

Design of Experiments and Quality Control papers:

Monitoring Community Infection Levels of Covid-19 Virus using Quality Control Techniques
Design of Experiments in Identification of Factors impacting Community Spread of Covid-19
Fractional Factorial DOEs in Identification of medical treatments that reduce Covid-19 infection

Reliability and Logistics papers:

Design and performance evaluation of ICU units, using Reliability
A summary of Fault Tree Analysis (FTA) and Failure Mode and Effects Analysis (FMEA)
An Example of Survival Analysis of Covid-19 using ICU & Patients Ventilator data
Statistical Methods to Accelerate Covid-19 Vaccine Clinical Trials using sequential analysis
Survival Methods to Establish Covid-19 Vaccine Life (Length of its Effectiveness)
ICU staff and equipment requirements for patient overflow, using Negative Binomial

Multivariate Analysis papers:

Principal Components and Discriminant Analysis of Covid-19 data: Part I
More on Principal Components and Discriminant Analysis of Covid-19 data: Part II
Principal Components and Discriminant Analysis of Covid-19 data:
Logistic Regression/Discriminant Analysis in Factor Identification of Covid-19 Clinical Trials

Modeling (Stochastic Processes) papers:

A Markov Chain model to study the spread of the Covid-19 virus
A Two-Absorbing-States Markov Chain to study the problem of Covid-19 Herd Immunization
A Markov Chain to study the problem of Re-opening Colleges under Covid-19
A Markov Model to Assess Covid-19 Vaccine Herd Immunization Patterns

Socio-economic and Technical Discussions

Fallouts of Off-Shoring (outsourcing) and Taxpayers' contributions, to Coronavirus Pandemic
A Digression on the Interaction between Race, Ethnicity, Class and Coronavirus.
A Digression about Aspects of Clinical Trials for the new Vaccine against Covid-19.
A Digression on Covid-19 Vaccine Rollout

Covid-19 Systems Analysis

Quality Engineering Methodology in Covid-19 Systems Design and Improvement

https://www.researchgate.net/publication/354322771_Quality_Engineering_Methodology_in_Hurricane_Mitigation_Procedure