COVID-19 Teaches Probability Risk Assessment

Authors : Sean Sloan

Abstract : Probability Risk Assessments (PRA) can be a difficult concept for students to grasp. So in searching for different ways to describe PRA to relate it to their lives; COVID-19 came up. The parallels are amazing. Soon students began analyzing acceptable risk with the virus. This helped them to quantify just how dangerous is dangerous. The original lesson was dismissed and for the remainder of the period, the probability of risk, and the lethality of risk became the topic. Spreading events such as a COVID carrier on an airline became analogous to single fault casualties such as a Tsunami. Odds of spreading became odds of backup-diesel-generator failure – like with Fukashima Daiichi. Fatalities of the disease became expected fatalities due to radiation spread. Quantification from this discussion took it from hyperbole and emotion into one where we could rationally base guidelines. It has been one of the most effective educational devices observed.