

Beta is the transmission rate of the disease while gamma is the recovery rate. For Seasonal Influenza, the transmission rate (Beta) is 0.3 whereas gamma (recovery rate) is 0.1. When we look at the graphs for Seasonal Influenza vs Measles, we notice that Measles have a much higher number of infected individuals and recovered individuals when compared to Seasonal Influenza. This makes sense because when looking at the equation for Infected Individuals, we see that it's dependent on susceptible individuals. When increasing beta (the transmission rate) we're in turn decreasing the susceptible individuals which results in an increase of infected individuals and recovered individuals. The same is applied to covid vs influenza. The transmission rate for covid is 1 and recovery rate is 0.1. Even though the recovery rate is the same, the amount of recovered individuals is different as time goes on because there is a higher number of infected individuals. The results make sense intuitively because as we increase the rate of a disease being spread, that means there is a higher rate of individuals being infected. When there's a higher chance of being infected: the number of infected people will increase. If you increase the number of infected people, that will in turn lead to an increase in the number of recovered individuals.