**Model Compartments**

**S** - Susceptible

**E** -Exposed

**IP** - Infectious Pre-symptomatic

**IA** - Infectious Asymptomatic

**IM** - Infectious Mild

**IC** - Infectious severe/Critical

**AP** - Ascertained Infectious Pre-symptomatic

**AA** - Ascertained Infectious Asymptomatic

**AM** - Ascertained Infectious Mild

**AC** - Ascertained Infectious Severe/Critical

**RA** - Ascertained Recovered

**RU** - Un-ascertained Recovered

AA

A

AC

AM

AP

RA

R

IC

IM

IP

E

S

IA

DA

DU

“Equations”

Disease process is the usual, plus some reduction in force of infection from Ascertained people

15-19 (with corrections): fixed proportion of entire non-recovered population (including S and E)

**Sdot =**

**1: S \* lambda**

**2: (1 – F\_s) sigma E**

**7: F\_s sigma E**

**F\_s = fraction asymptomatic**

**Model assumptions**

•Some infections are completely asymptomatic.

•“Symptomatic” infections begin without symptoms (I\_P), then progress to mild

symptoms (I\_M). Some infections progress to severe symptoms, while others

recover\*.

•Only severe/critical infections die from Covid.

•Recovery with full and lasting immunity.