

seiqhrf_model

Libraries

```
library(tidyverse)
library(magrittr)
library(lubridate)
library(stringr)
library(tibble)
library(broom)
library(ggplot2)
library(gt)
library(knitr)
library(devtools)
library(DiagrammeR)
library(parallel)
library(foreach)
library(tictoc)
suppressMessages(library(EpiModel))
library(incidence)
library(earlyR)
```

The SEIQHRF model

Compartment	Functional definition
S	Susceptible individuals
E	Exposed and infected, not yet symptomatic but potentially infectious
I	Infected, symptomatic and infectious
Q	Infectious, but (self-)isolated
H	Requiring hospitalisation (would normally be hospitalised if capacity available)
R	Recovered, immune from further infection
F	Case fatality (death due to COVID-19, not other causes)

Transition diagram

These functions extend the `EpiModel` code to define a SEIQHRF model.

```
source("model/_icm.mod.init.seiqhrf.R")
source("model/_icm.mod.status.seiqhrf.R")
source("model/_icm.mod.vital.seiqhrf.R")
source("model/_icm.control.seiqhrf.R")
source("model/_icm.utils.seiqhrf.R")
source("model/_icm.saveout.seiqhrf.R")
source("model/_icm.icm.seiqhrf.R")
```