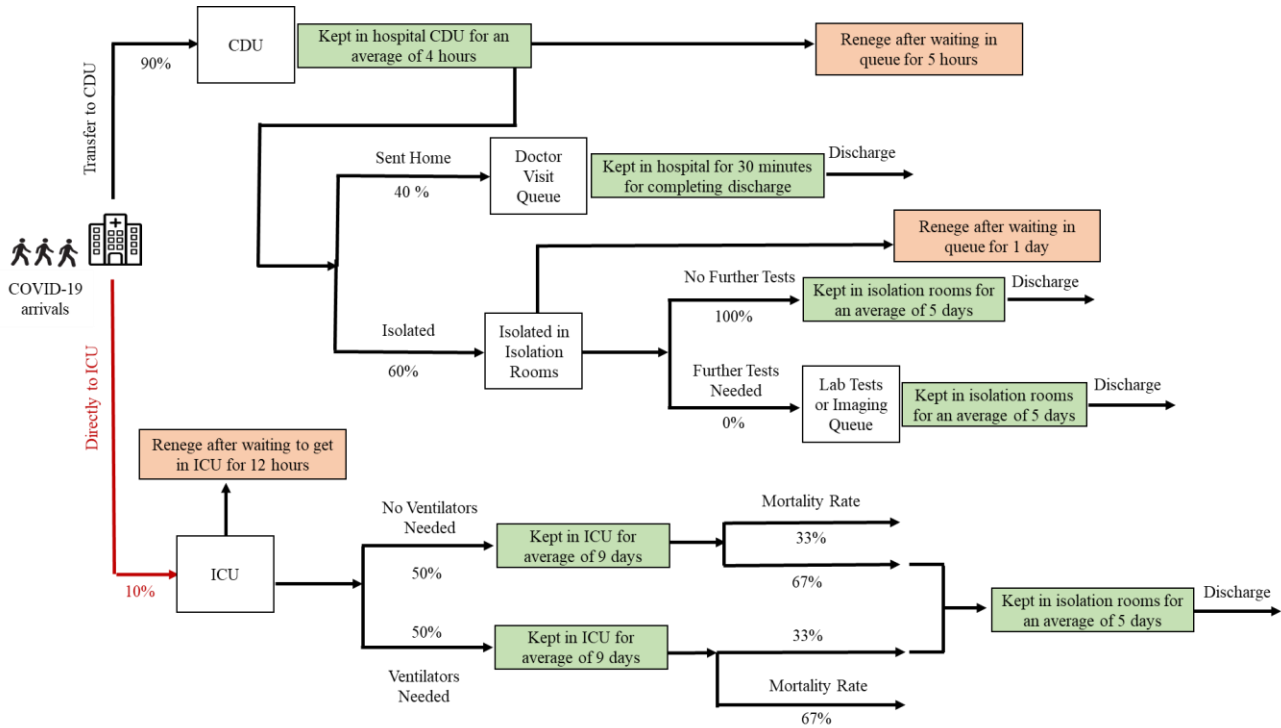


# Modeling COVID-19 Care Paths



## COVID-19 Patient Activity Details

Kept in hospital CDU with a mode of 4 hours	Triangular (a=2, b=6, c=4 hours)
Kept in hospital for 30 minutes for completing discharge	Constant (30 minutes)
Routine patients kept in ICU with a mode of 2 days	Triangular (a=.25, b=6, c=2 days)
Kept in ICU for a mode of 9 days	Triangular (a=5, b=14, c=9 days)
Kept in isolation rooms with a mode of 5 days	Triangular (a=2, b=10, c=5 days)

## Queue Details

CDU	Needed Resources per Patient	COVID-19 Nurses	0.167 hour
		PPE	1
Doctor Visits	Needed Resources per Patient	COVID-19 Doctors	0.167 hour
		PPE	1
Isolation Room	Needed Resources per Patient	COVID-19 Doctor	0.167 hour
		COVID-19 Nurse	0.167 hour
		COVID-19 Bed	1
		PPE	2
ICU (COVID-19 & Routine patients)	Needed Resources per Patient	ICU Doctor	0.1 hour
		ICU Nurse	0.5 hour
		ICU Bed	1
		PPE	1

Used in

Resources Created for COVID-19	
CDU	Isolation Rooms ISO
COVID-19 Doctors	16
COVID-19 Nurses	16
COVID-19 Beds	70 ISO 25 CDU
Ventilators	∞
PPE	∞

Used in

Resources Used in COVID-19 Care Paths from Routine Resource Pools	
ICU	
ICU Doctors	2
ICU Nurses	10
ICU Beds	20

## Other Details

Most other details follow assumptions from:

TariVerdi, M., Miller-Hooks, E., Kirsch, T. and Levin, S., 2019. A resource-constrained, multi-unit hospital model for operational strategies evaluation under routine and surge demand scenarios. *IIE Transactions on Healthcare Systems Engineering*, 9(2), pp.103-119.