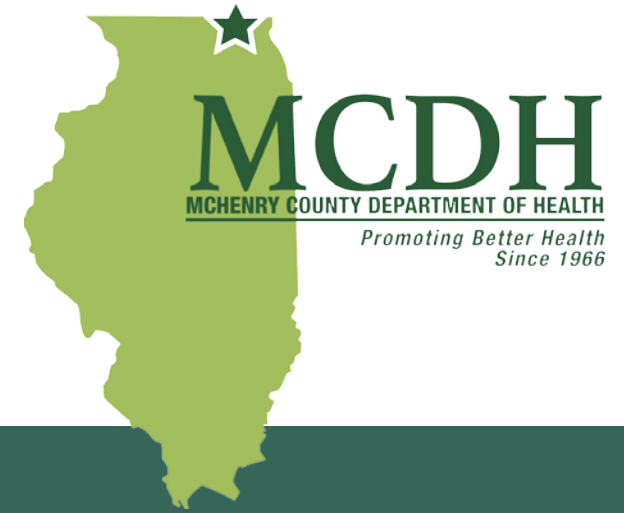


# COVID-19 Epi Team Update

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# Outline

- Case Statistics and Trends
- Evidence of “Flattening the Curve”
- Epidemiological Modeling
- Restore Illinois Metrics for McHenry County



# Case Statistics and Trends



# Case Statistics

## All Cases

Statistic	Frequency
Cases	971
Deaths	53
Hospitalizations	277
Discharged from Hospital	234
Recovered	293

## Cases Associated with LTCF Outbreak

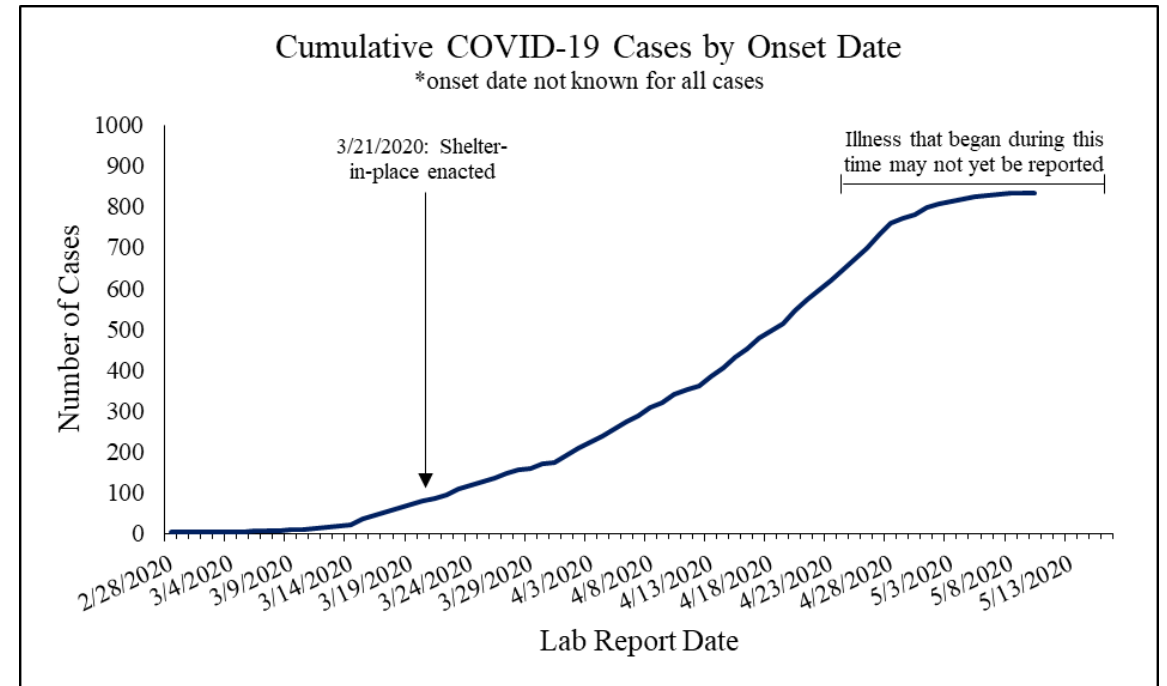
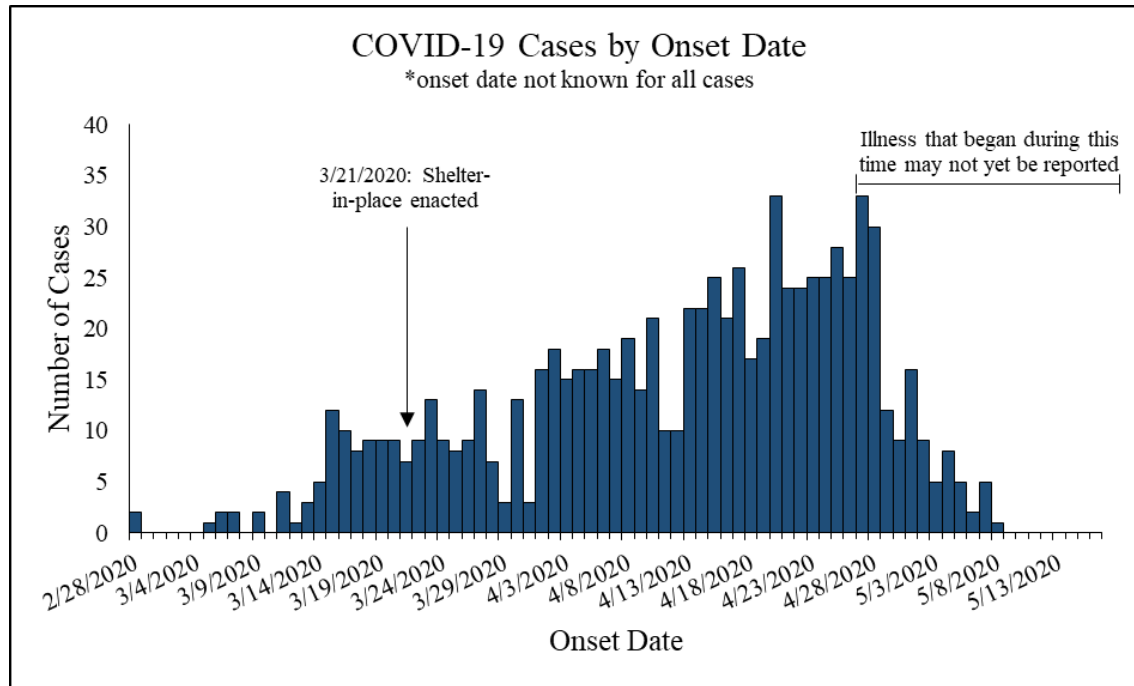
Statistic	Associated with LTCF Outbreak	Not Associated with LTCF Outbreak
Cases	244	727
Deaths	38	15
Hospitalizations	111	166

## Demographics

Category	Frequency	Percentage	Rate per 10,000 Pop.
<i>Gender</i>			
Male	454	46.8%	29.6
Female	508	52.3%	32.9
Unknown	9	0.9%	-
<i>Race</i>			
White	636	65.5%	22.4
Black or African American	40	4.1%	89.4
Asian	27	2.8%	32.4
Other	46	4.7%	93.4
Unknown	222	22.9%	-
<i>Ethnicity</i>			
Hispanic or Latino	252	26.0%	64.1
Not Hispanic or Latino	478	49.2%	17.8
Unknown/Not Classified	241	24.8%	-

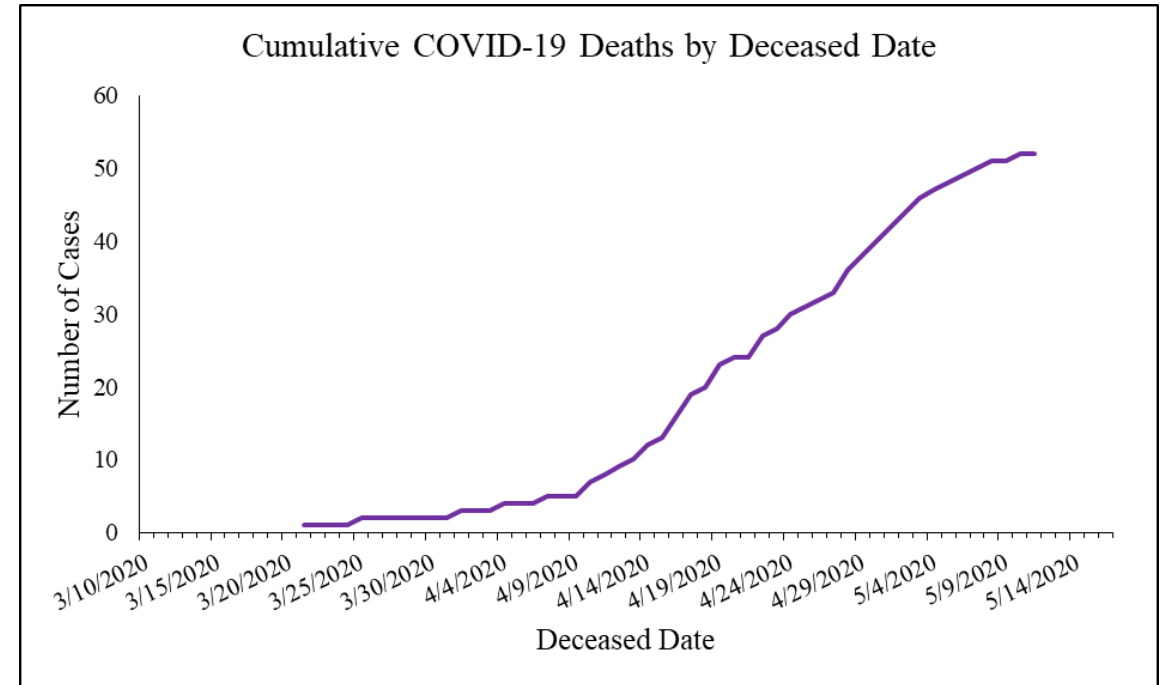
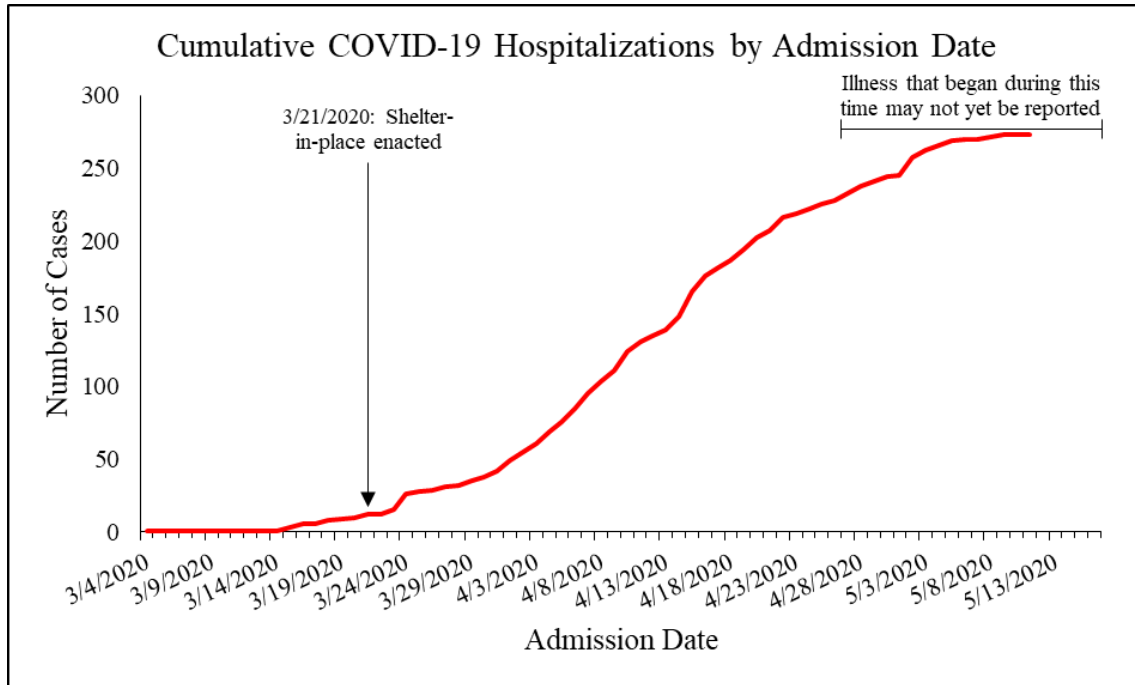
\*All data is provisional as of 5/11/2020 and subject to change; data for the number of cases discharged from the hospital and the number of cases recovered is actively being investigated and is likely an underestimate

# Epi Curve



\*All data is provisional as of 5/11/2020 and subject to change

# Hospitalization and Death Curves



\*All data is provisional as of 5/11/2020 and subject to change



# Evidence of “Flattening the Curve”



# Doubling Days and COVID-19

- The amount of time it takes for the total number of cases to double
- Doubling days inversely associated with  $R_0$
- Doubling days increases as we flatten the curve





# Epidemiological Modeling

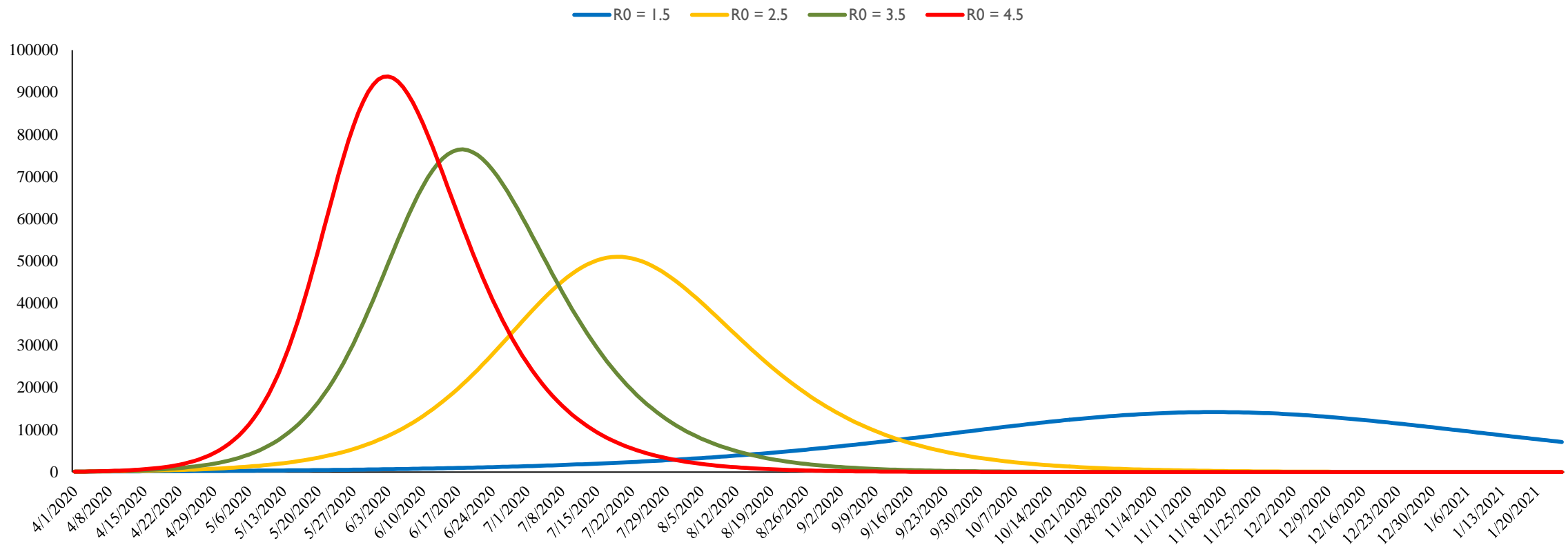


# Logic and Assumptions

1. The simulations begins as McHenry County reaches community spread defined as 100 cases (April 1<sup>st</sup>)
2. R0 is artificially lowered due to social distancing
3. Exposure period lasts 5 days
4. Infectious period lasts 12 days (10 days isolation, 2 days asymptomatic spread)
5. Death rate of 5.6/100 (based on CDC metrics)

# Models

## Effect of R0 on Total Cases after Reaching Community Spread



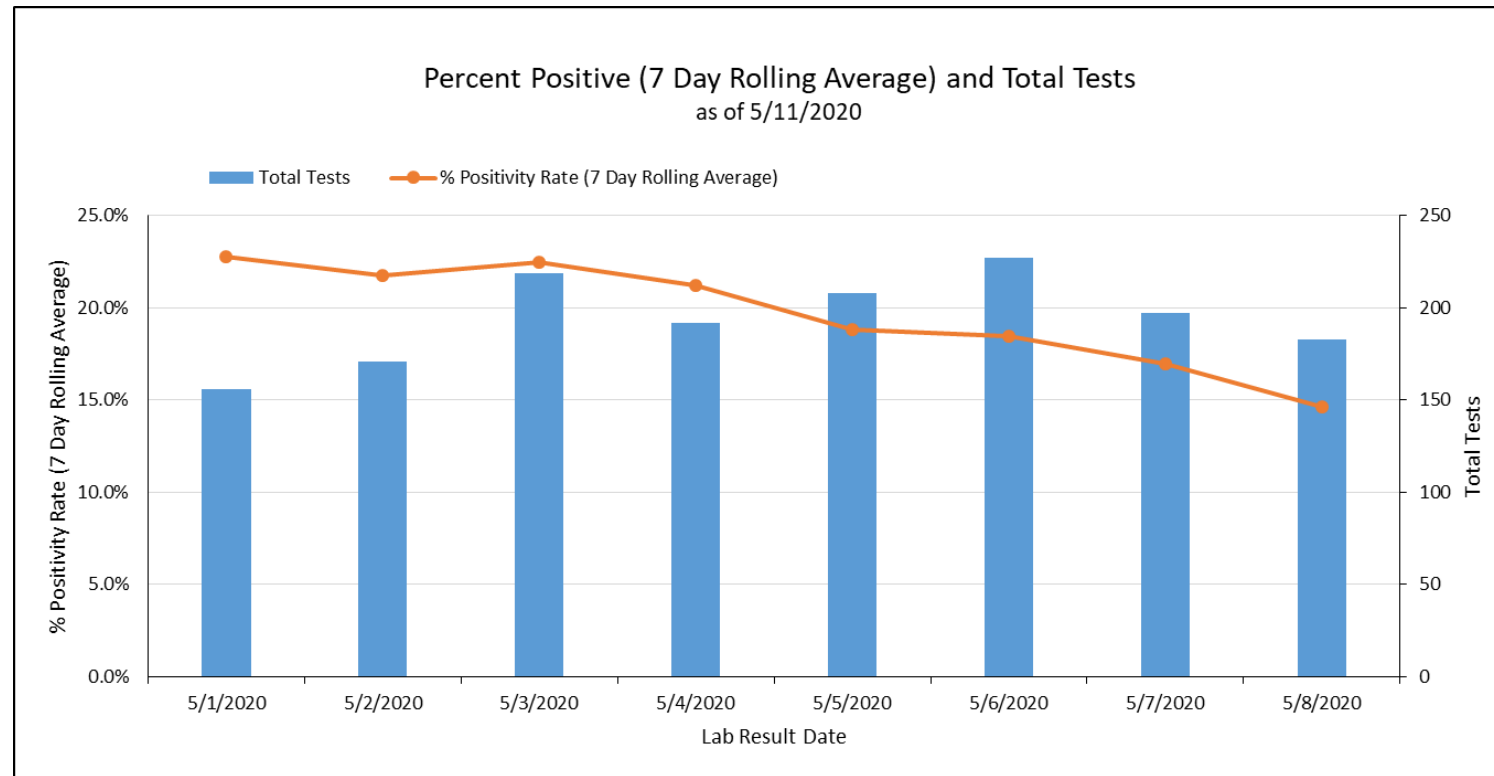
# Model Outputs

<b>R0</b>	<b>Peak date</b>	<b>% of County sick at peak</b>
1.5	11/16	4.6
2.5	7/19	16.6
3.5	6/18	24.8
4.5	6/3	30.5



# Restore Illinois Metrics for McHenry County

# Positivity Rate



\*All data is provisional as of 5/11/2020 and subject to change



Questions?