

# COVID-19 Wave 1 Colorado

SEPTEMBER 11, 2020



# Health System Collaborative Participants



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# About the Data

- ▶ Includes 6,329 COVID-19 confirmed admissions
  - ▶ 98% of statewide admissions (6,441 admissions per CDPHE)
  - ▶ 60,252 patient days
  - ▶ 17,431 ventilator days
- ▶ All patients had a positive COVID-19 PCR test
- ▶ Admitted between March 1, 2020 and July 31, 2020

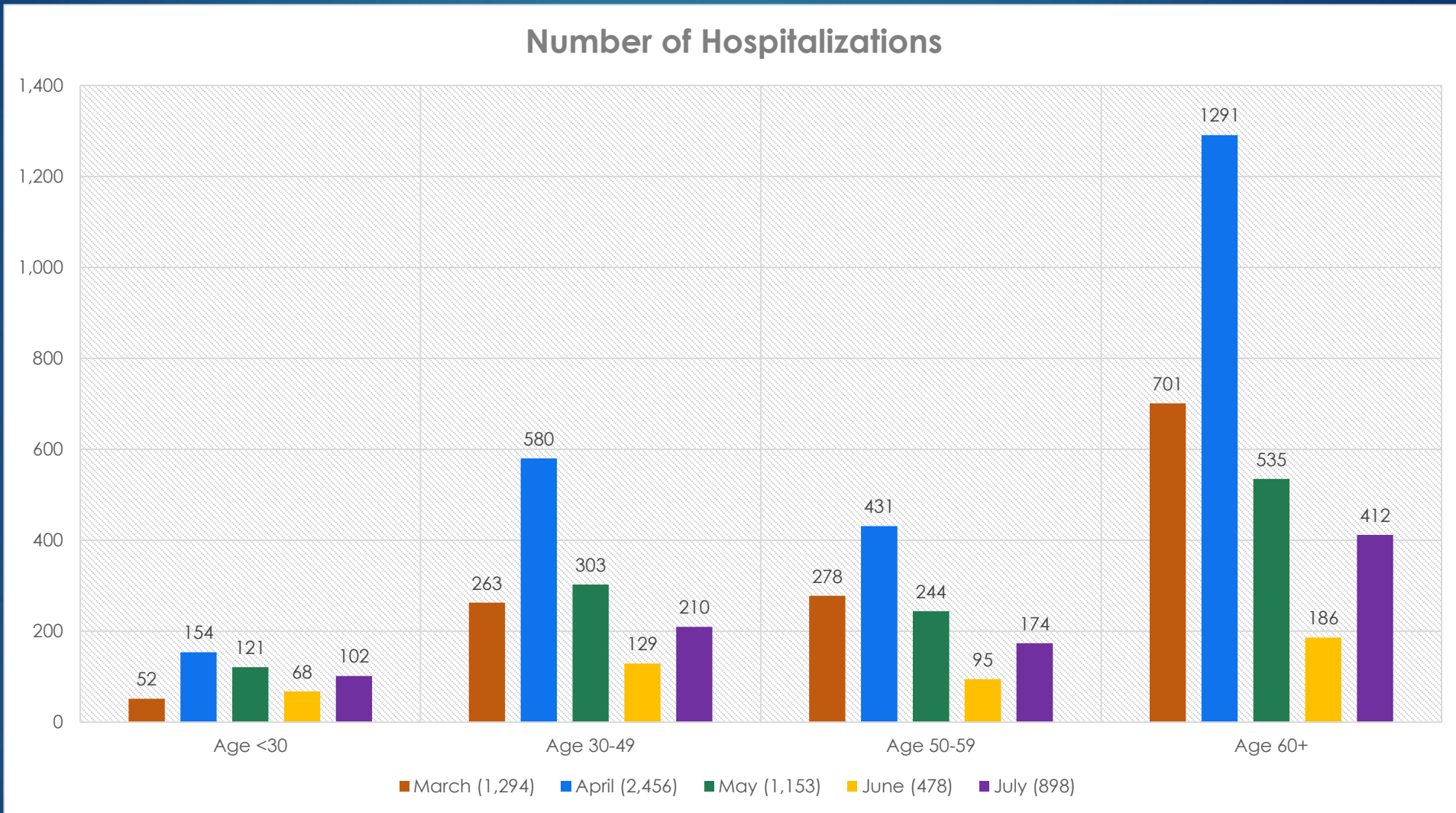
# About the Patients

- ▶ 67.2% (4,250) patients discharged to home
- ▶ 18.4% (1,162) patients discharged to another facility (Skilled Nursing Facility, Acute Rehab, Long Term Acute Care Hospital, another Acute Care Hospital or Hospice)
- ▶ Overall in-hospital mortality 13.5% (855)

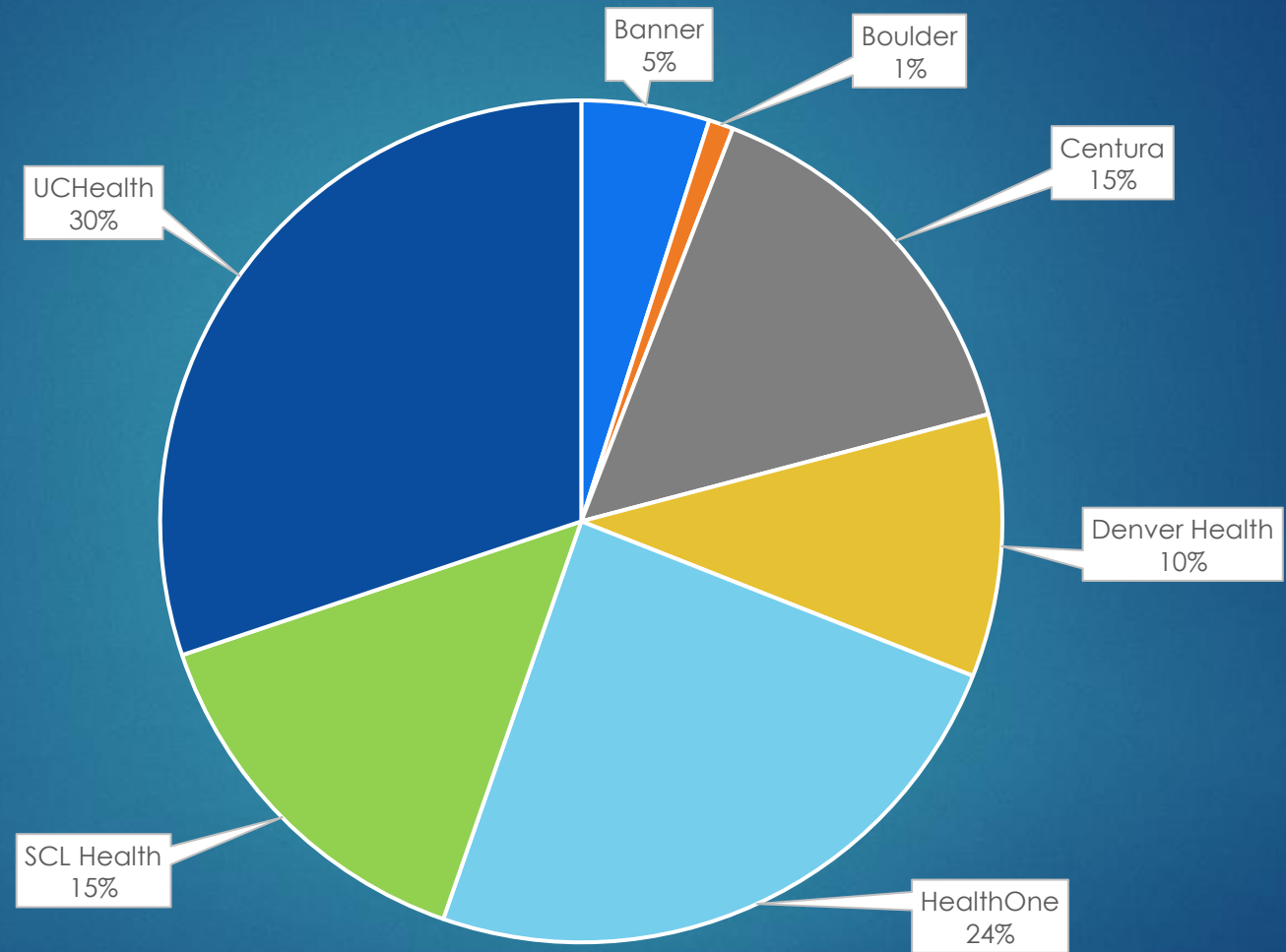
# About the Data: Caveats

- ▶ The data is not risk adjusted or case-mix adjusted
- ▶ The data was aggregated and de-identified at a health system level, and then aggregated centrally
- ▶ COVID-19 positive patient readmissions and transfers may be included in the datasets – a single patient may be counted more than once in the data
- ▶ 62 patients in the dataset remained hospitalized at the time the data was compiled, which could slightly skew mortality and length of stay in July

# Number of Hospitalizations



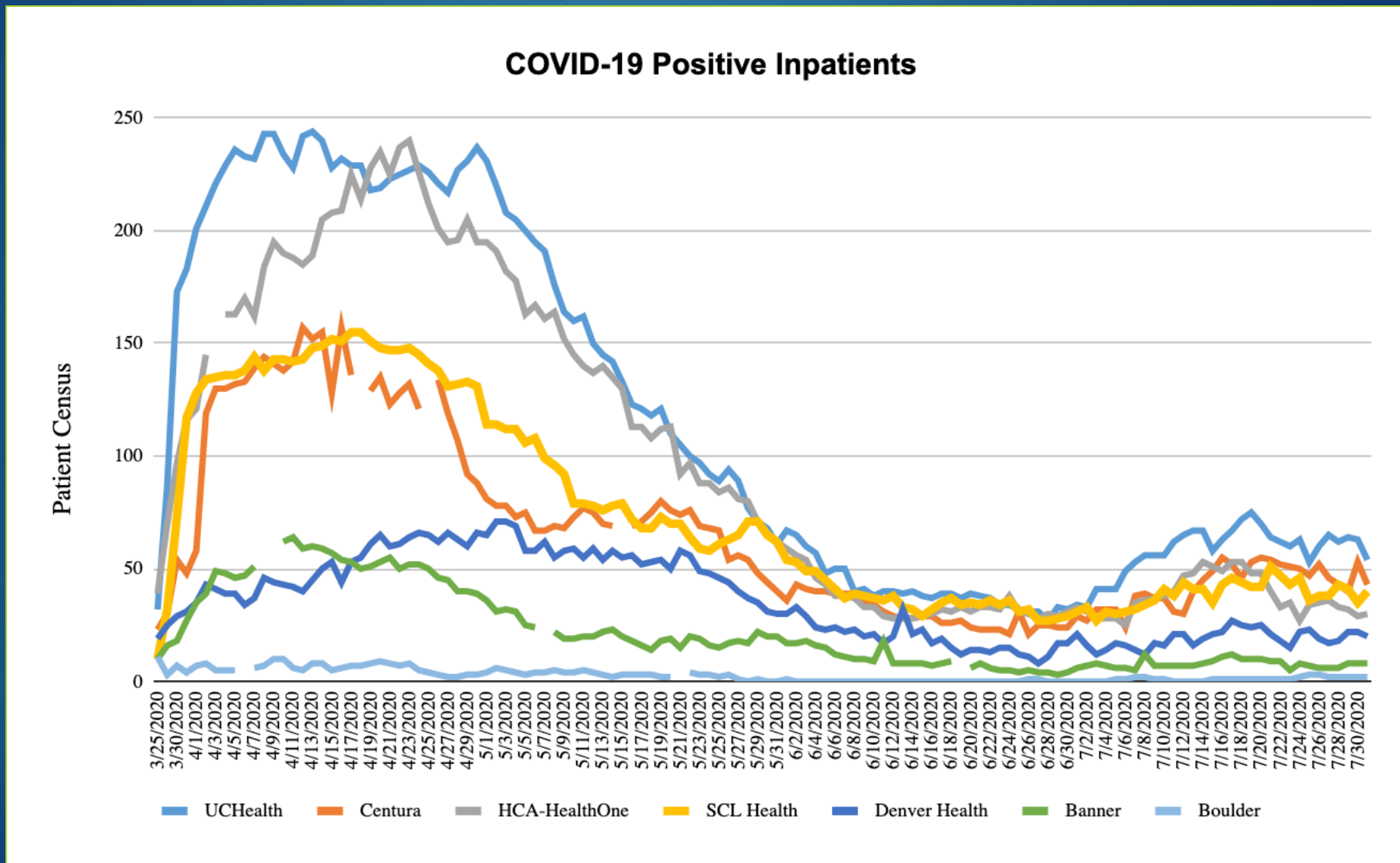
# Distribution of Admissions Across Systems



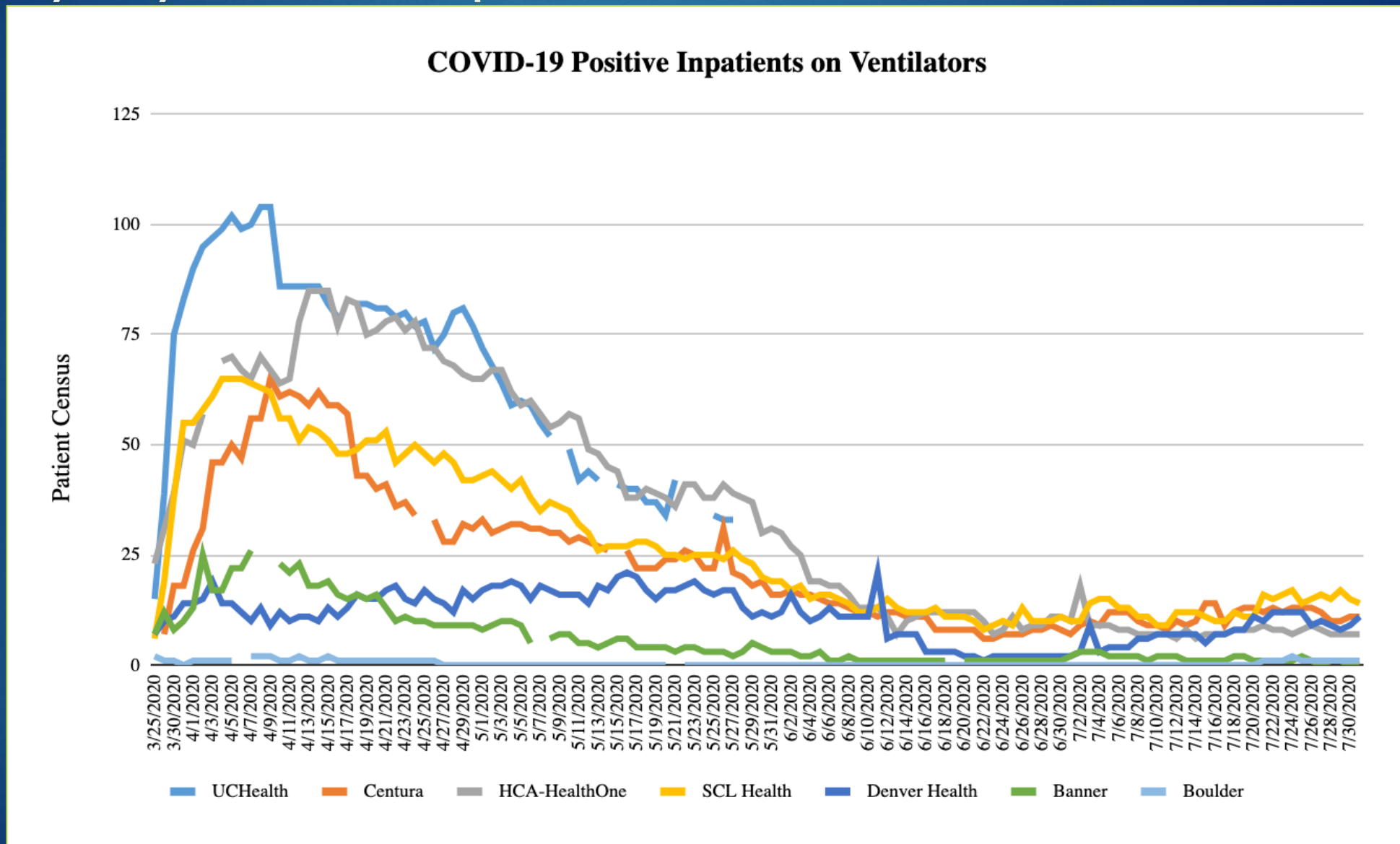
# Daily Reported Inpatient Census



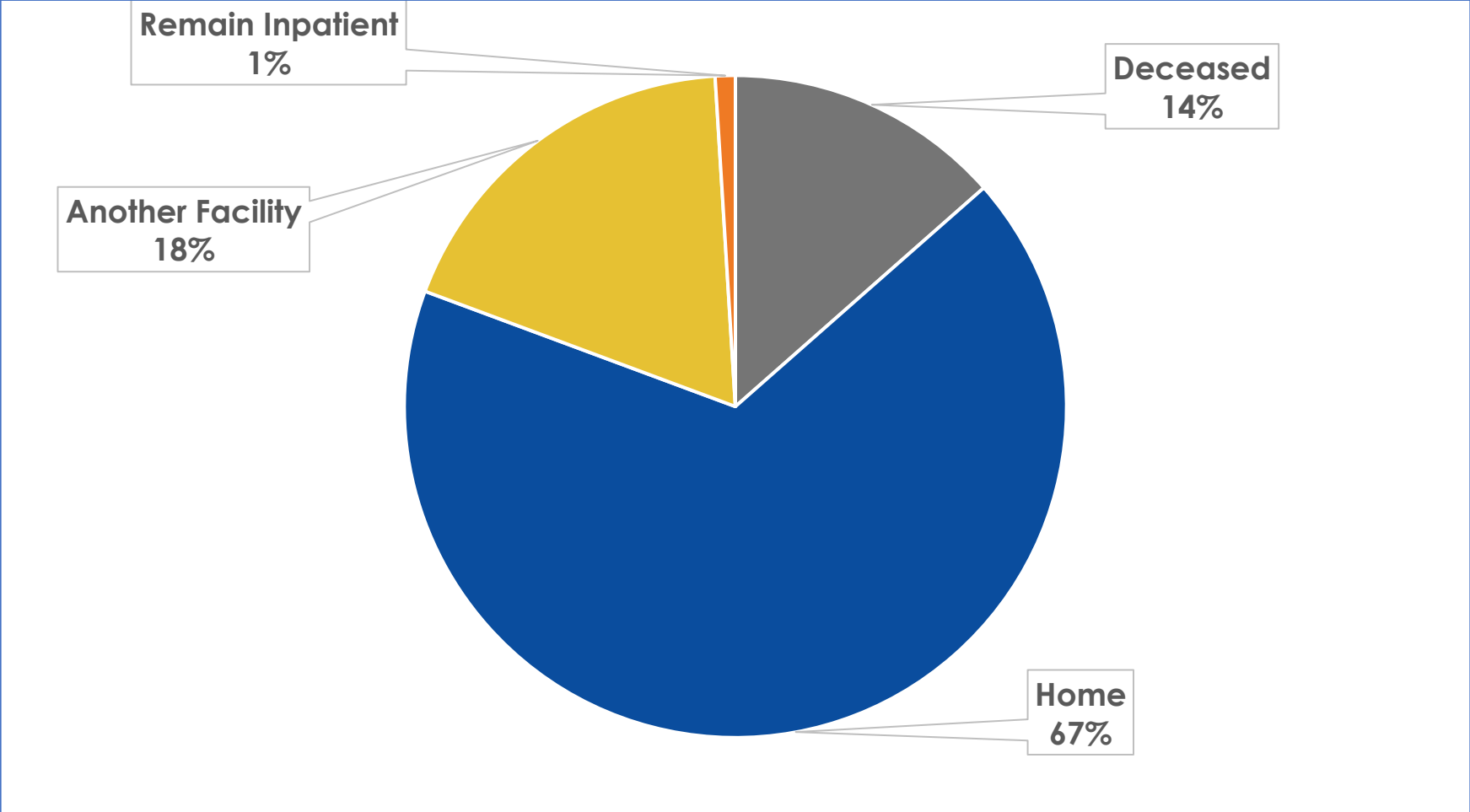
# Daily System Inpatient Census



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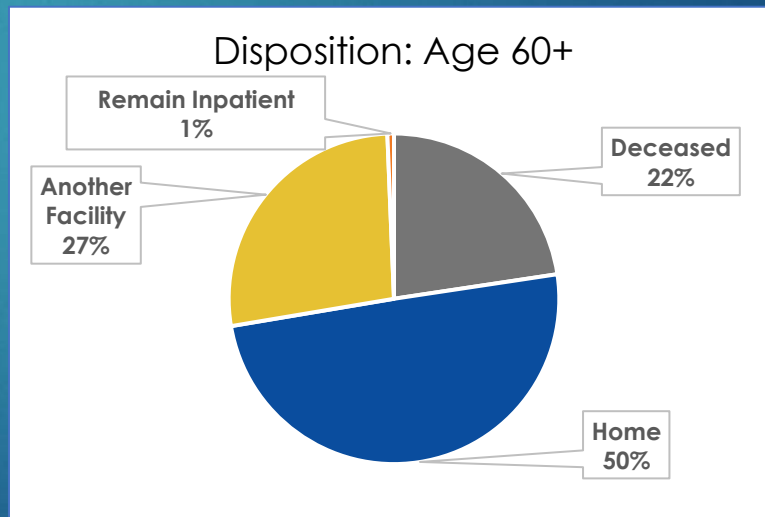
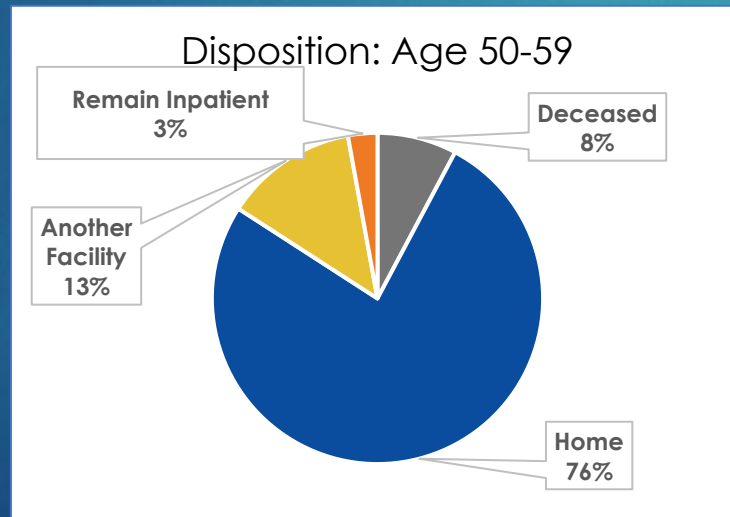
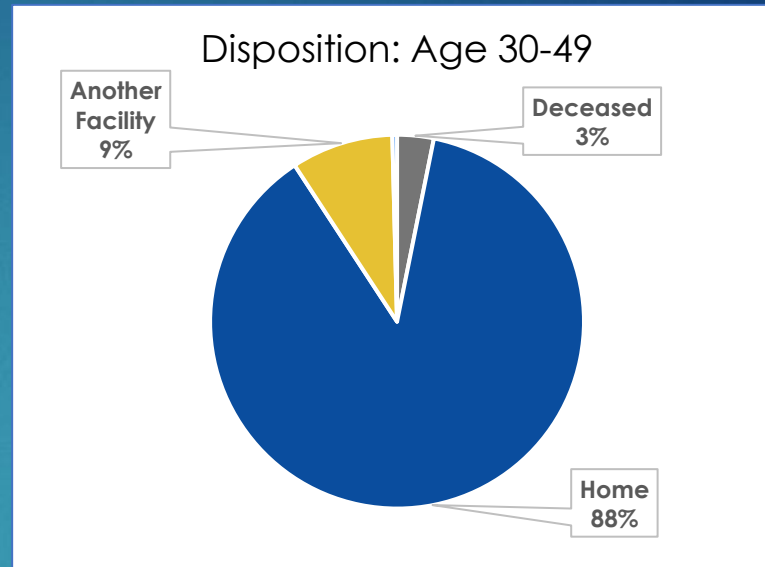
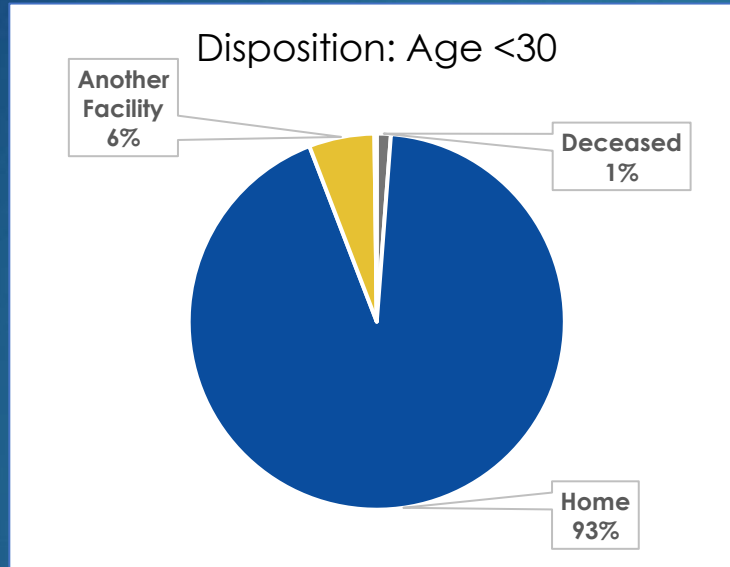


# Disposition: All COVID-19 Patients

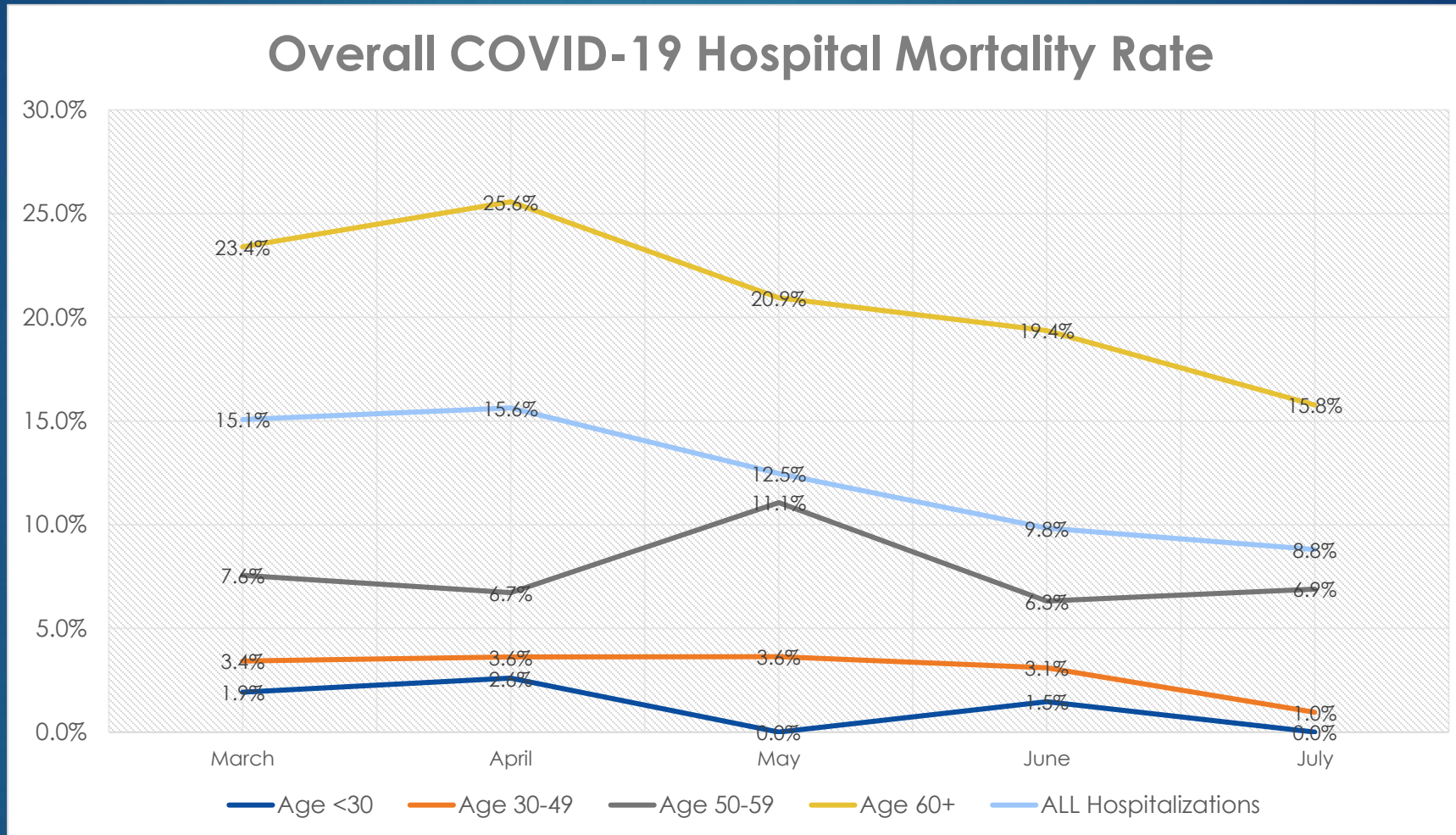


\* "Another Facility" includes SNF, LTAC, Rehab, Another Acute Hospital, or Hospice

# COVID -19 Patient Disposition by Age Group



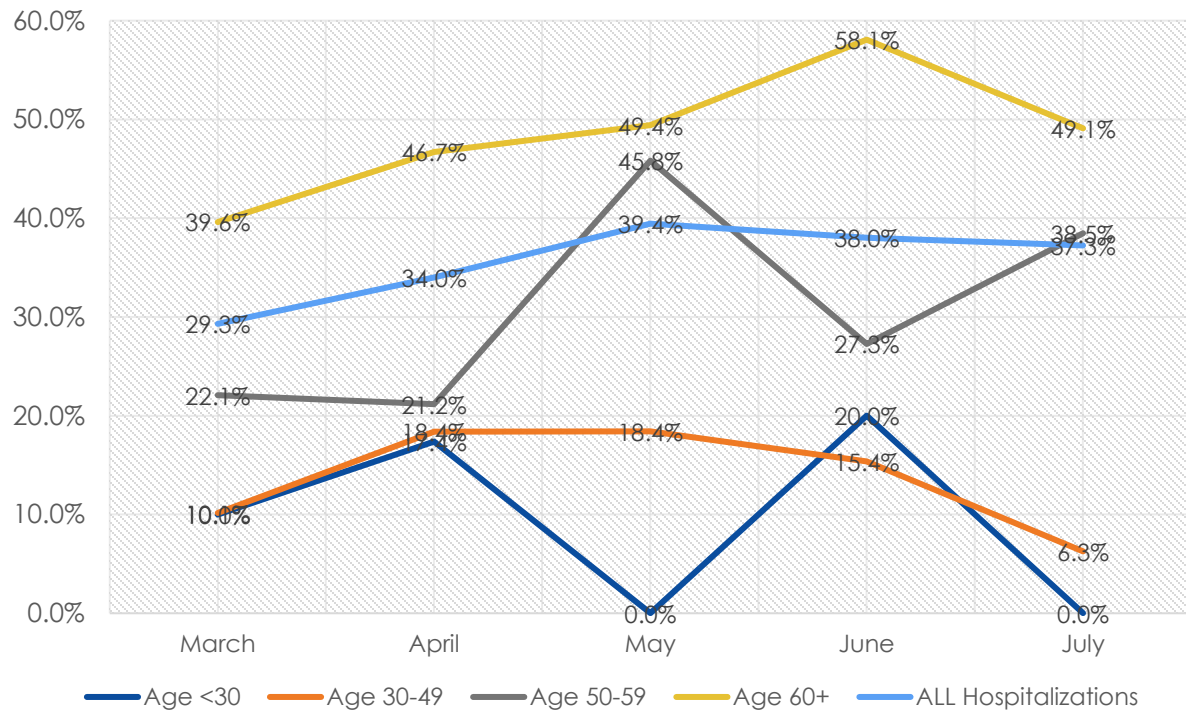
# Overall COVID-19 Mortality Rate



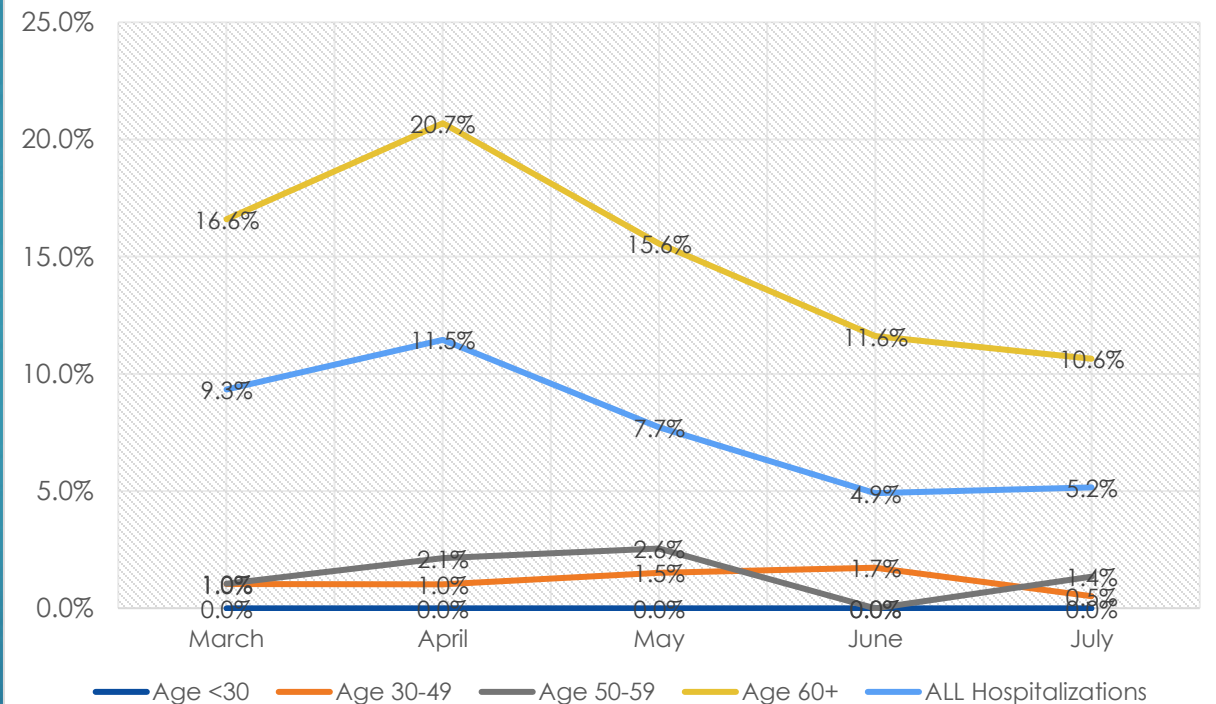
# Mortality Rates

## Patients Ventilated vs. No Time on Ventilator

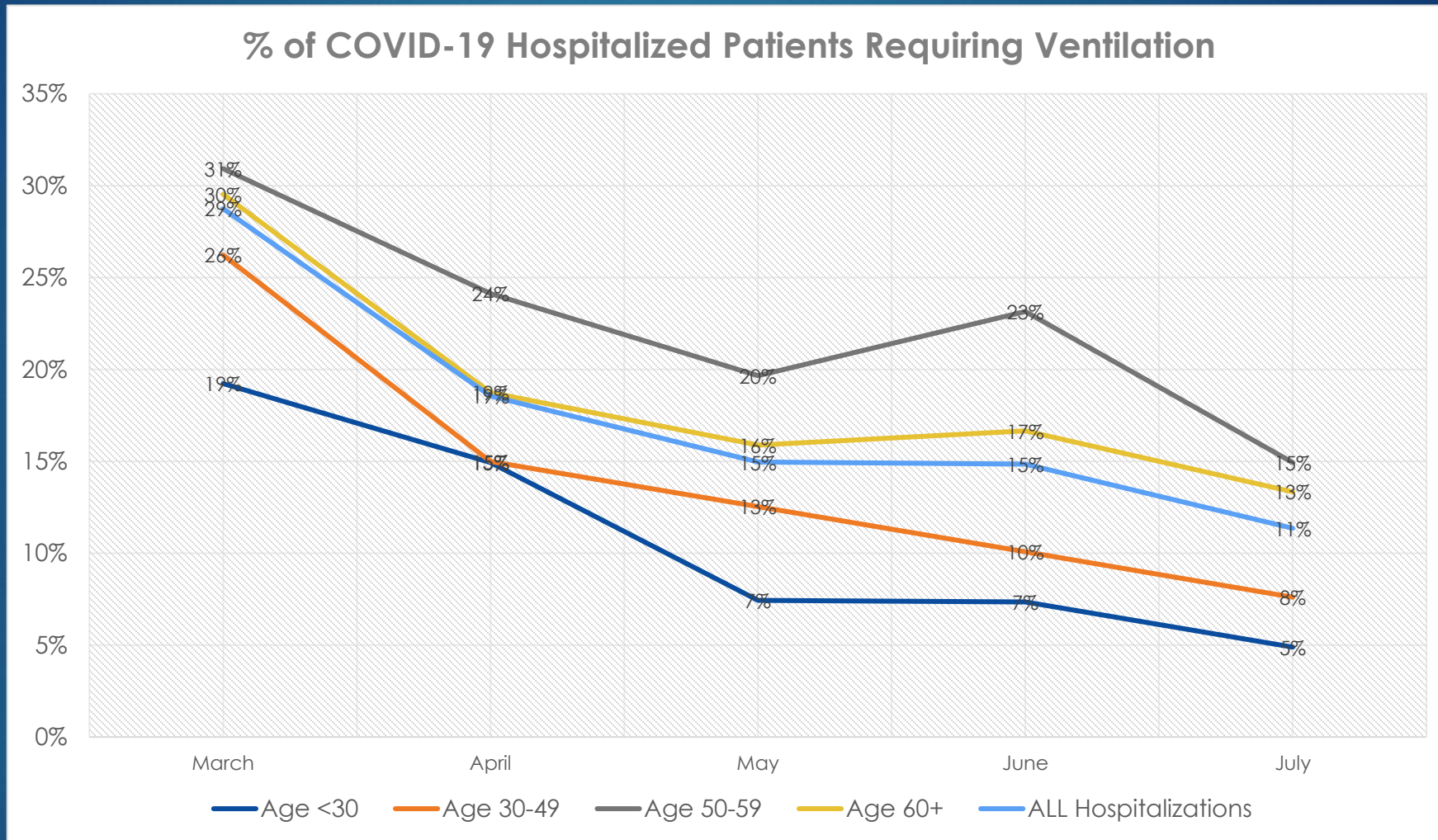
COVID-19 Mortality Rate - Any Time on Ventilator



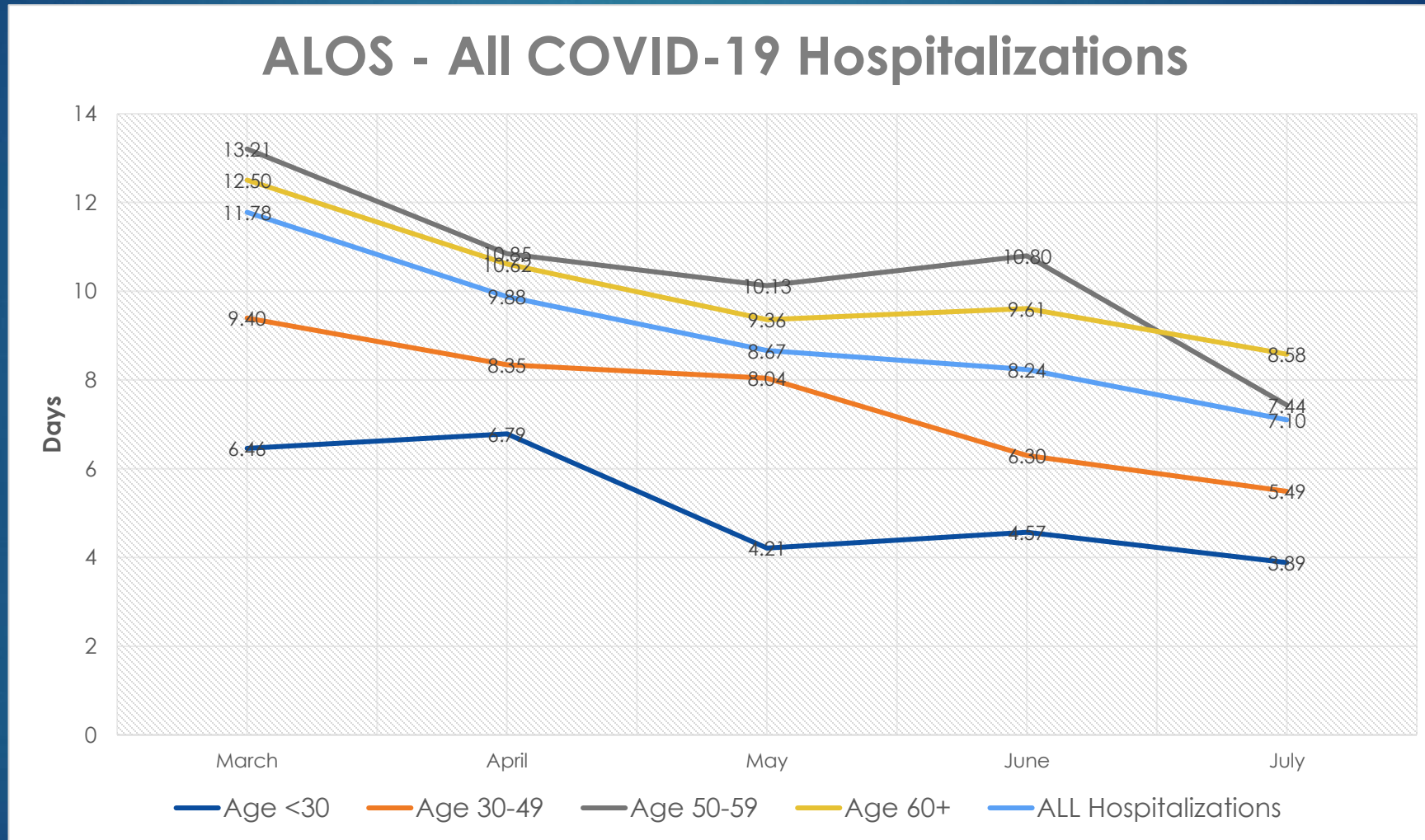
COVID-19 Mortality - No Time on Ventilator



# Decreased Use of Mechanical Ventilation



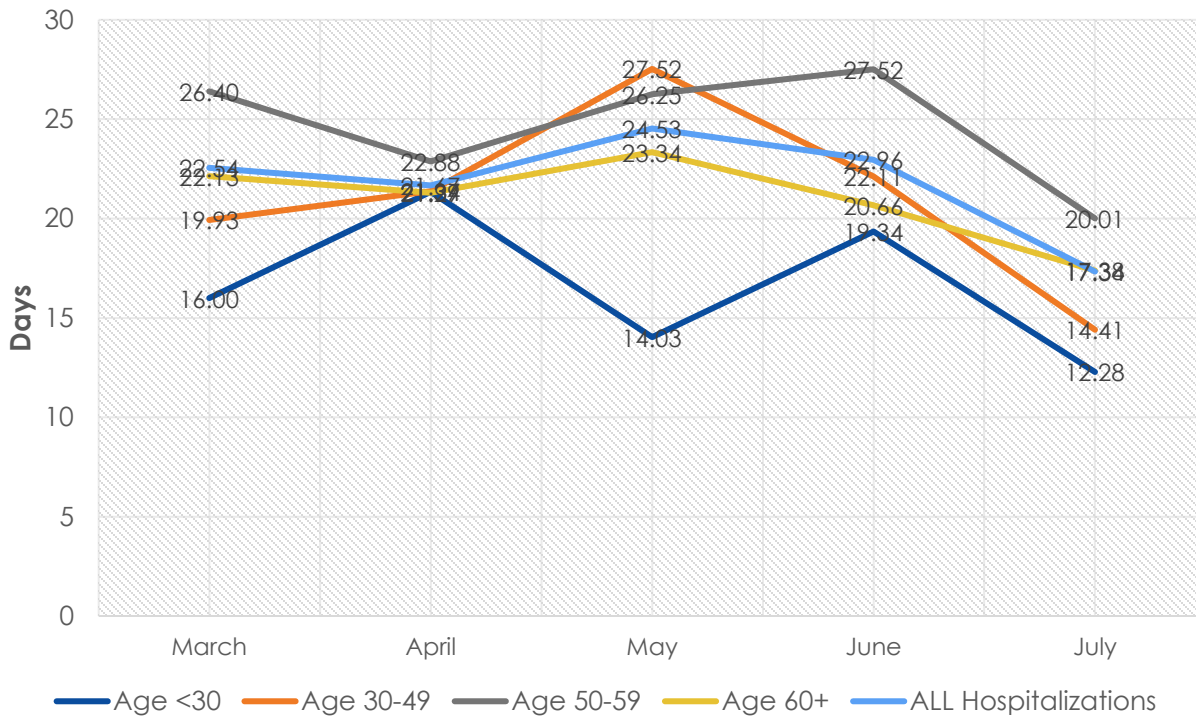
# Improved Average Length of Stay (ALOS)



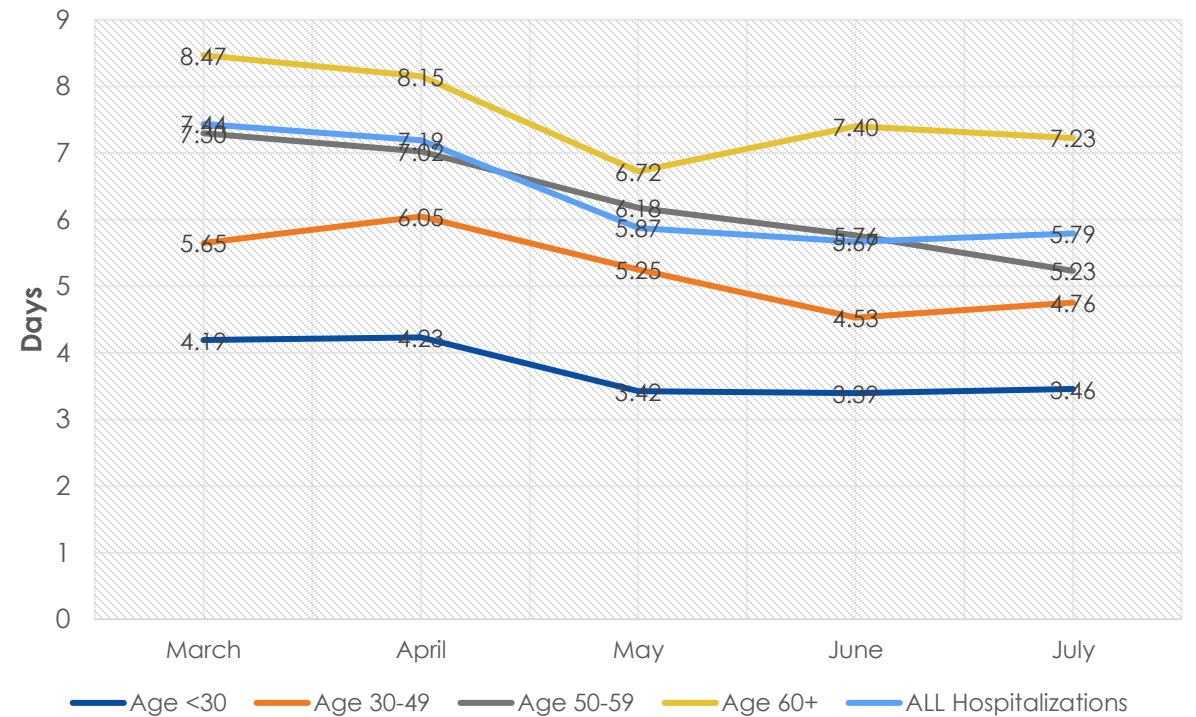


# Improved Average Length Of Stay (ALOS) Patients Ventilated vs. No Time on Ventilator

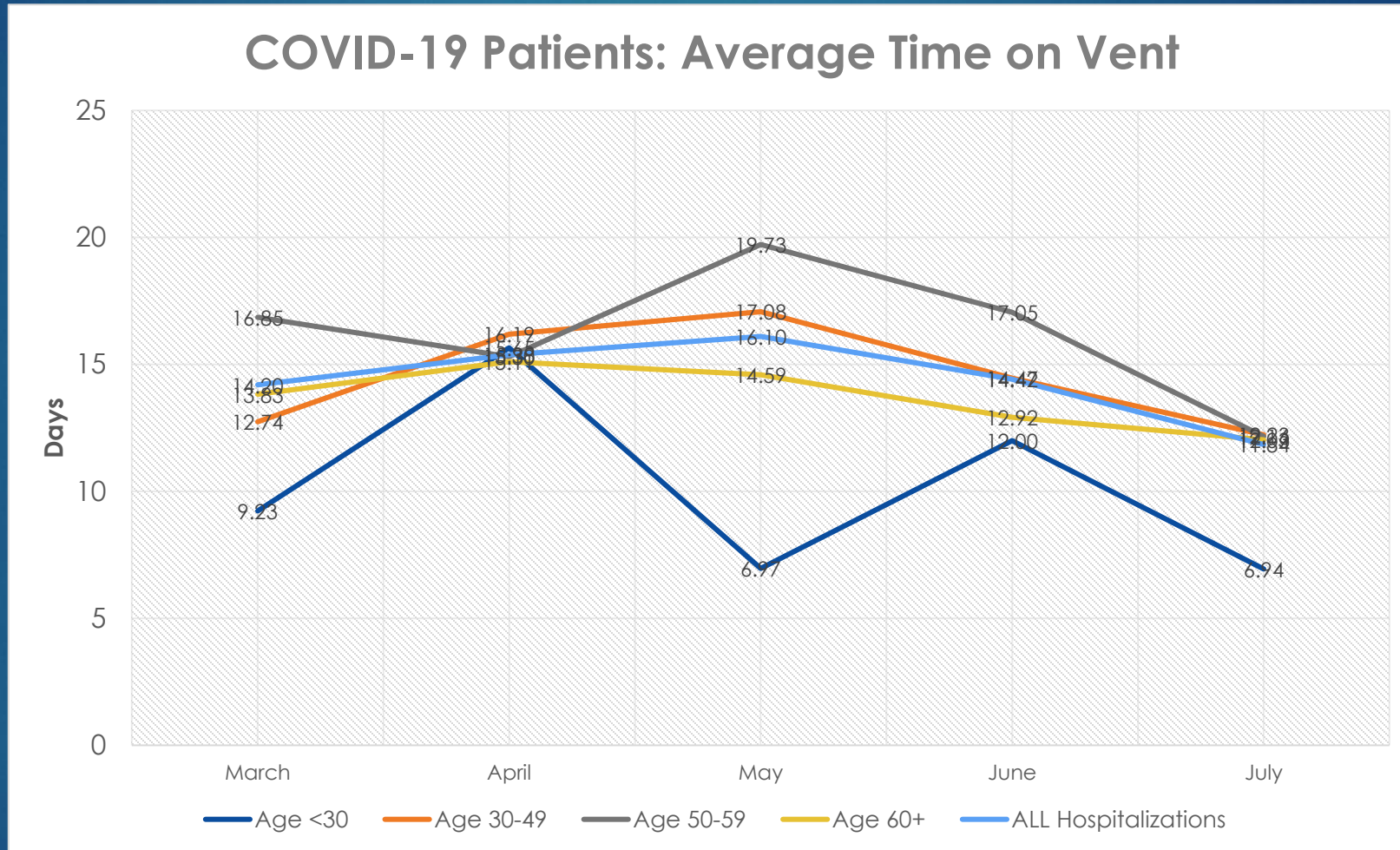
ALOS - COVID-19 Patients - Any Time on Ventilator



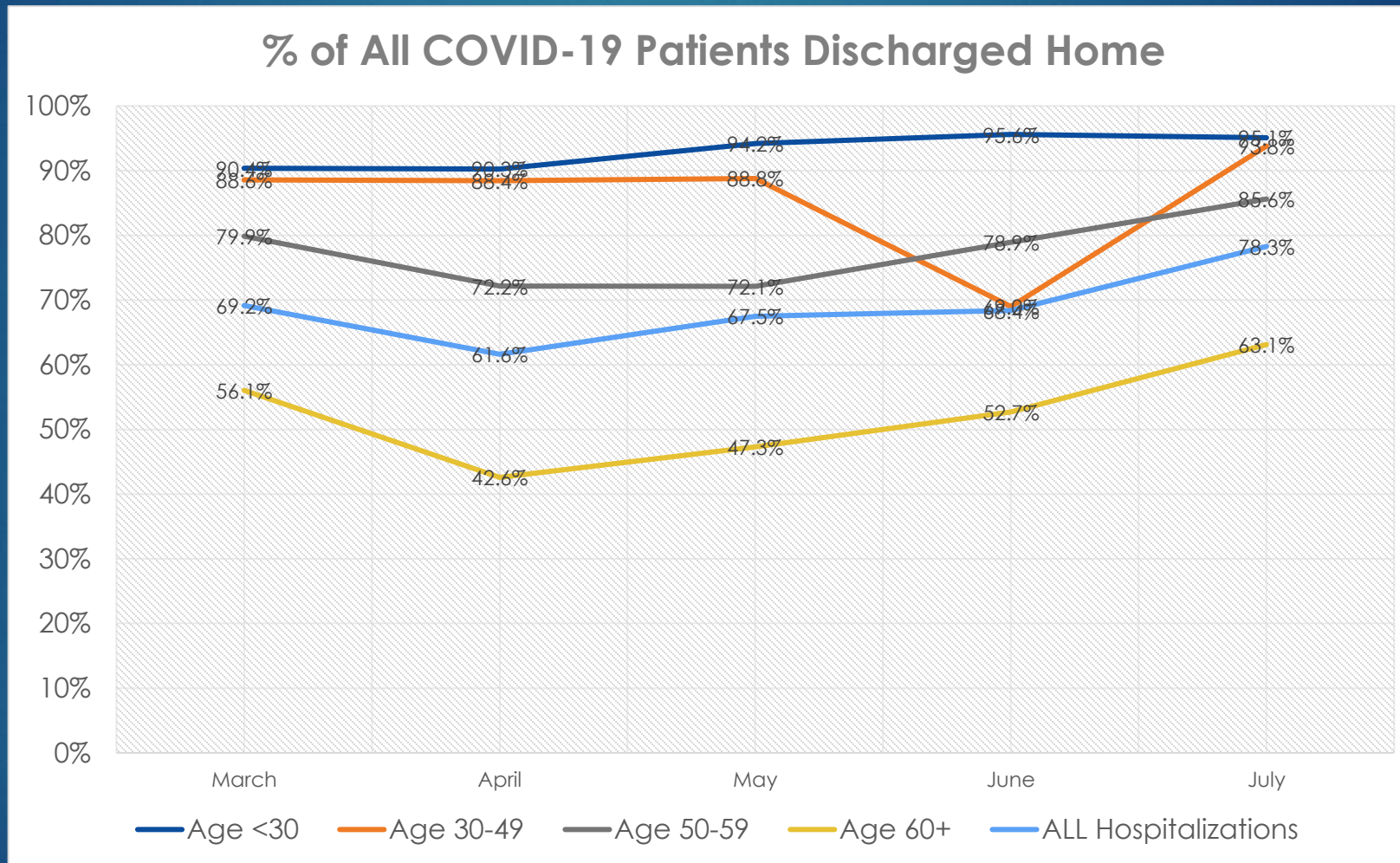
ALOS - COVID-19 Patients - No Time on Ventilator



# Average Time on Ventilator

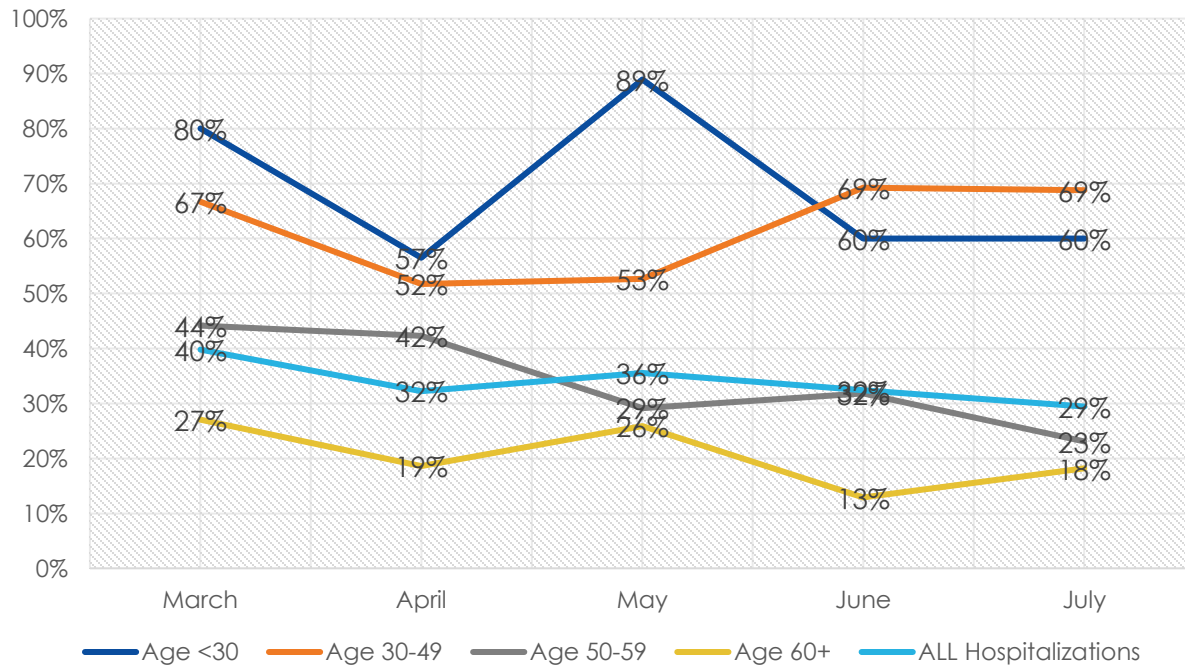


# Discharge to Home: All Patients

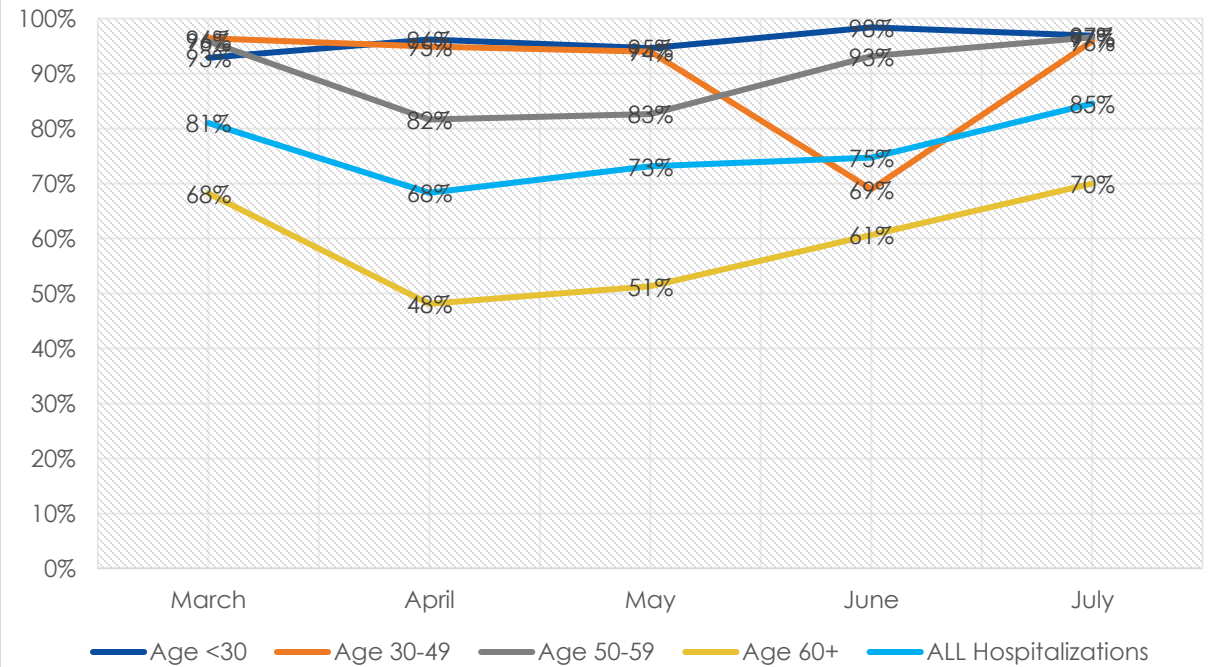


# Patients Discharged to Home: Ventilated vs. No Time on Ventilator

% Discharged Home - COVID-19 - Anytime on Vent



% Discharge Home - COVID-19 - No Time on Vent



# Summary

- ▶ This dataset provides a comprehensive view of Wave 1 of COVID-19 in Colorado
- ▶ Length of stay, mortality rates and ventilator use rates were observed to be higher in older age groups
- ▶ Patients requiring mechanical ventilation were observed to have:
  - ▶ Higher mortality
  - ▶ Longer lengths of stay
  - ▶ Lower rates of discharge to home

# Summary

- ▶ Ventilator utilization decreased between March and July
- ▶ Study was not designed to evaluate the cause of improved outcomes, but could be related to:
  - ▶ Improved patient management and treatment algorithms
  - ▶ Rapid sharing and dissemination of knowledge and best practices
  - ▶ New therapies including antivirals and convalescent plasma
  - ▶ Baseline patient characteristics and comorbidities
- ▶ Rates of ventilator use and length of stay data can help with future surge planning for potential future waves of COVID-19 in Colorado

# Thank You to the Real Heroes!

