



COVID Utilization and Hospitalization Trends

October 2020

David Vaamonde
Vice President, Data Analytics

Data Sources/ Methodology

- **Data Source:**
 - **VHHA Inpatient Database:** 91 Hospitals; 176K discharges in Q2; 100% submission rate.
 - **VHHA ED Database (Voluntary):** 81 Hospitals; 475K discharges in Q2; 89% submission rate.
- **Timeframes:**
 - Inpatient volumes: 2017-2020
 - ED volumes: 2019-2020
 - **COVID Trends:** Q2 2020 (April-June)
- A COVID flag was added to the patient record in the Q2 2020 dataset
- **The sample size for flagged COVID hospitalizations: 8,728**
 - 77 hospitals

Initial Approach

- Fill knowledge gaps on key hospital COVID data by examining aggregate trends using hospital discharge data.
 - Impact of COVID on hospital volumes
 - Race distribution
 - Payer distribution
 - Discharge disposition
 - Length of stay
 - Patient comorbidities and chronic conditions



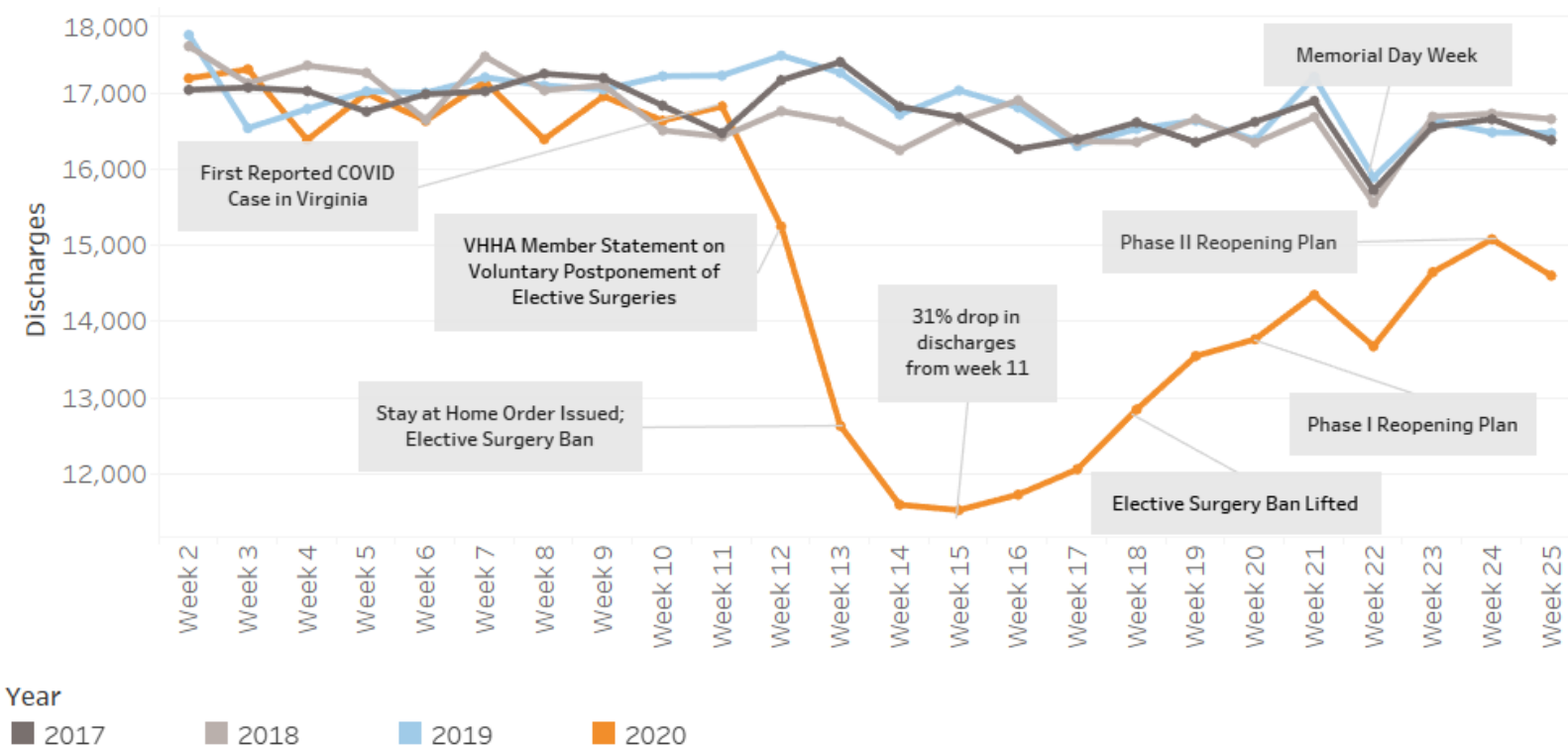
Impact of COVID on Hospital Volumes

Inpatient Discharge Volumes Down 11% YTD Relative To Previous Years

Total Inpatient Discharges by Quarter (Q1 and Q2 2017-2020)

| 2017 | | 2018 | | 2019 | | 2020 | |
|-------------|---------|-------------|---------|-------------|---------|-------------|---------|
| Q1 | Q2 | Q1 | Q2 | Q1 | Q2 | Q1 | Q2 |
| 218,301 | 214,610 | 217,618 | 214,583 | 218,825 | 215,599 | 209,923 | 175,848 |
| 432,911 YTD | | 432,201 YTD | | 434,424 YTD | | 385,771 YTD | |

Inpatient Discharges by Week (Q1 and Q2 2017-2020)

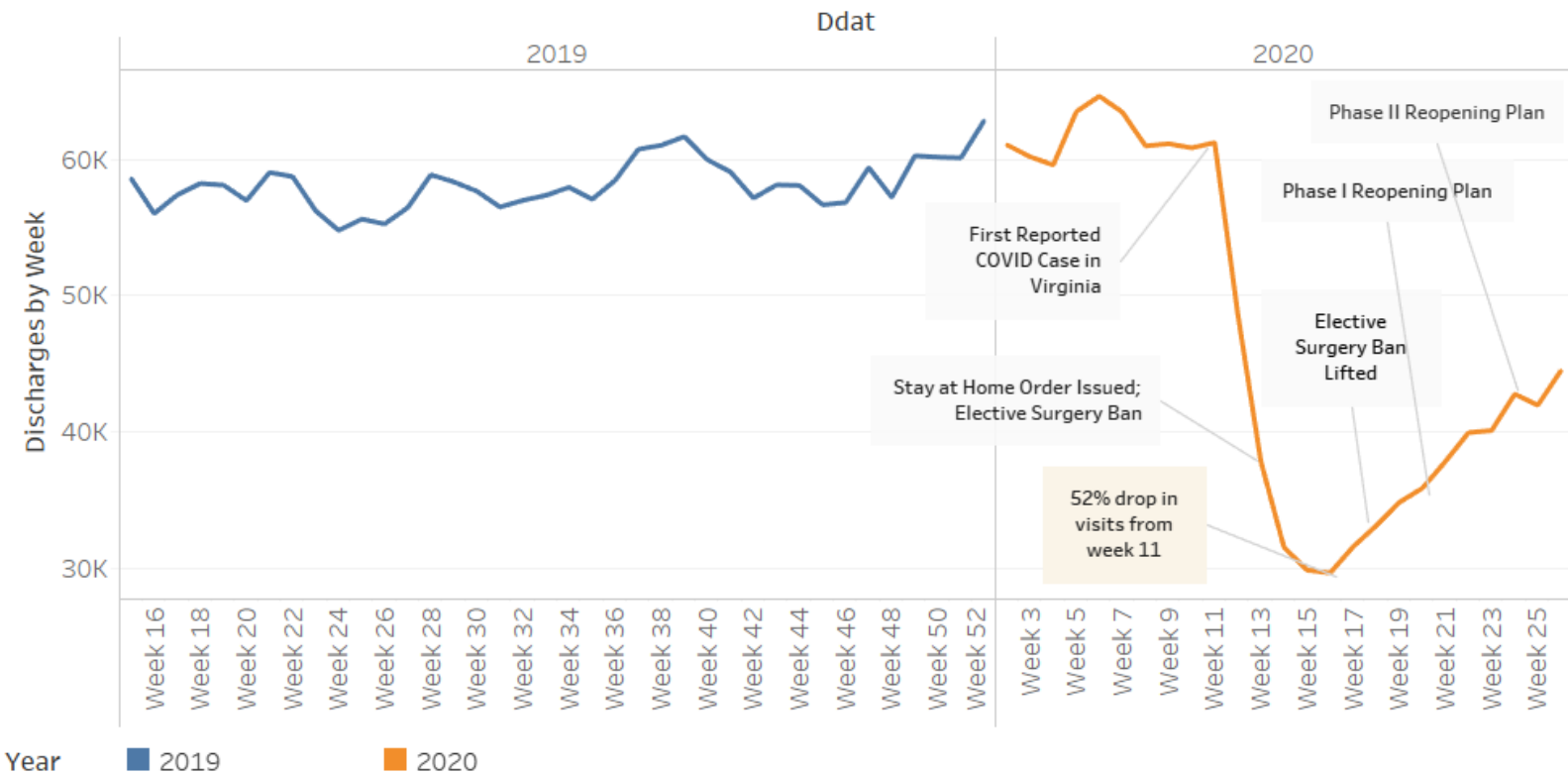


ED Volumes Down 38% YTD Relative To Previous Quarters

Virginia ED Visits by Quarter (Q2 2019 to Q2 2020)

| 2019 | | | 2020 | |
|-----------|---------|---------|---------|---------|
| Q2 | Q3 | Q4 | Q1 | Q2 |
| 692,911 * | 768,549 | 748,794 | 717,369 | 459,428 |

Emergency Department Visits by Week (Q2 2019 to Q2 2020)



* Beginnig of ED data collection at VHHA. Not all facilities submitted 100% of ED records.



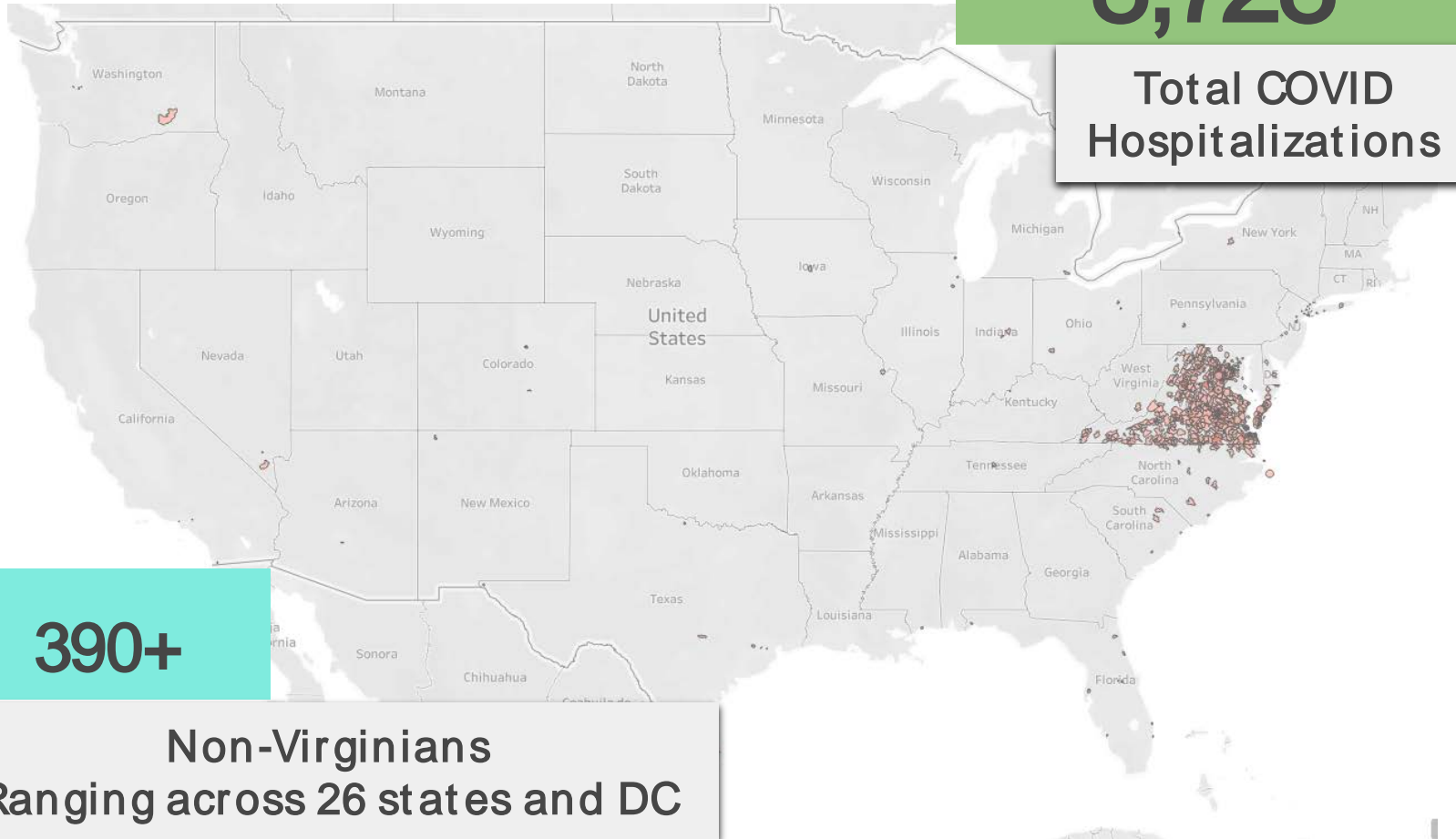
Q2 2020 COVID Trends

COVID Hospitalizations by Patient Origin

April-June 2020

8,728

**Total COVID
Hospitalizations**

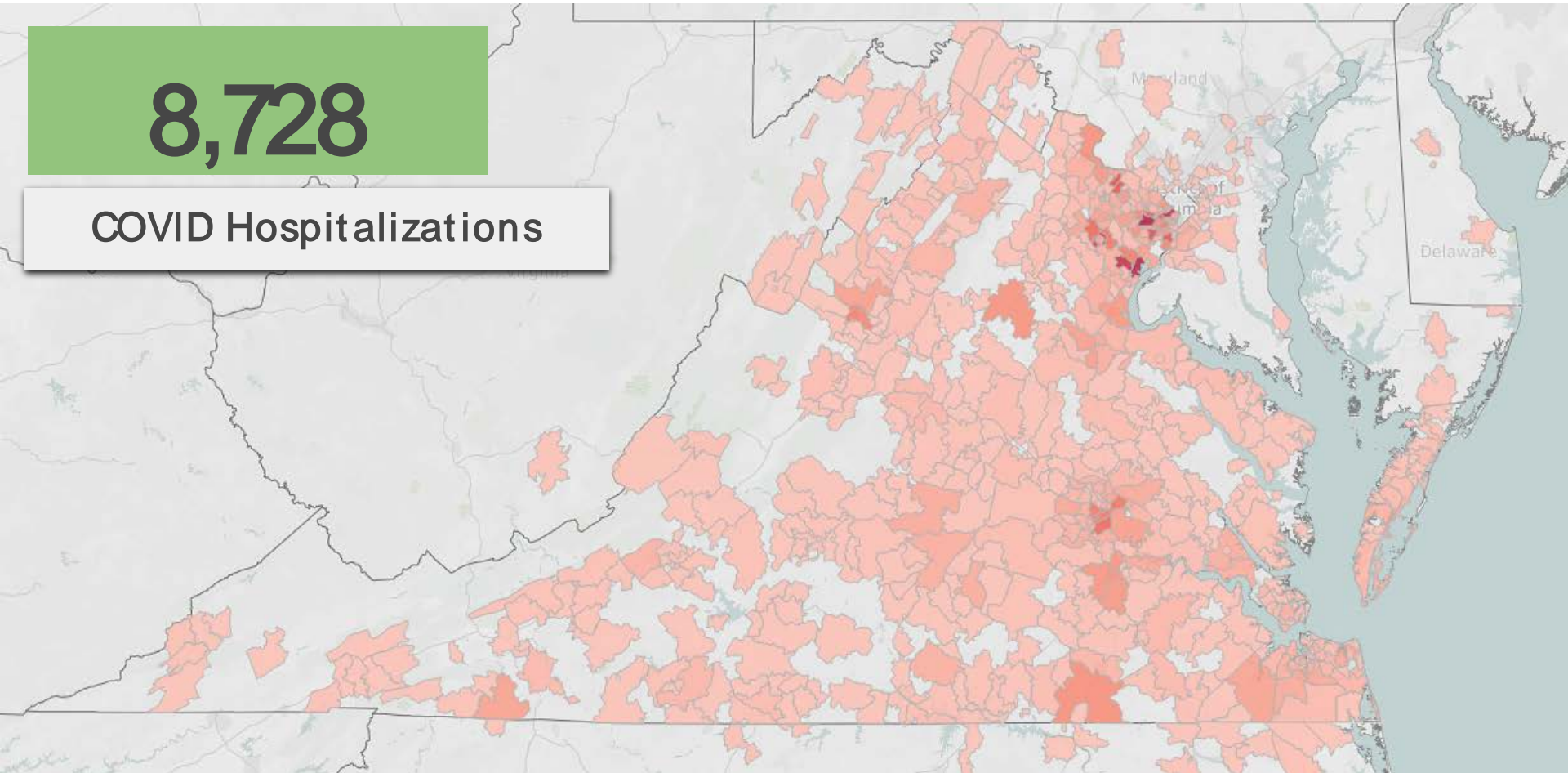


COVID Hospitalizations by Patient Origin

April-June 2020

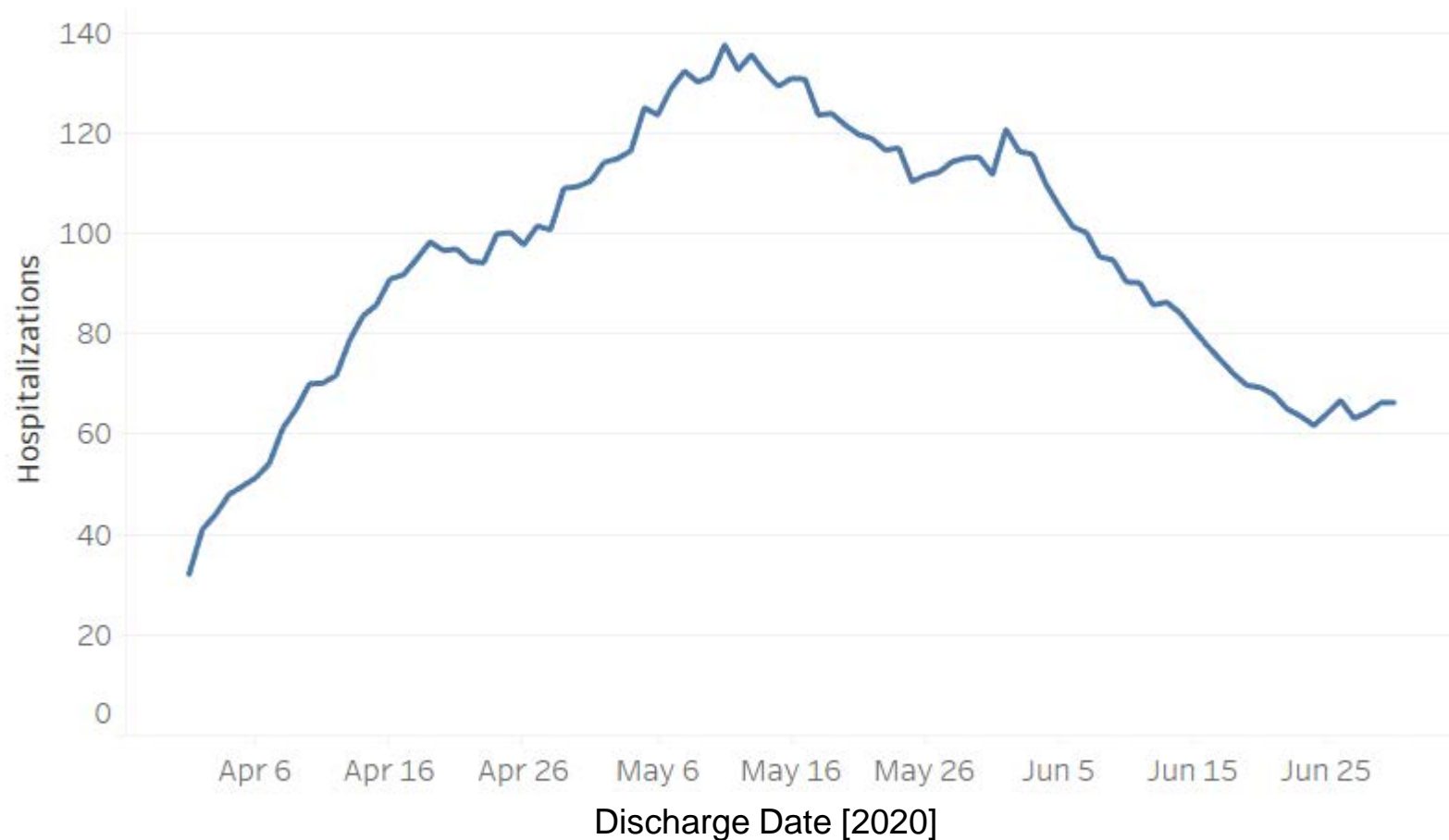
8,728

COVID Hospitalizations



7-day Average of Discharged COVID Hospitalizations

April-June 2020



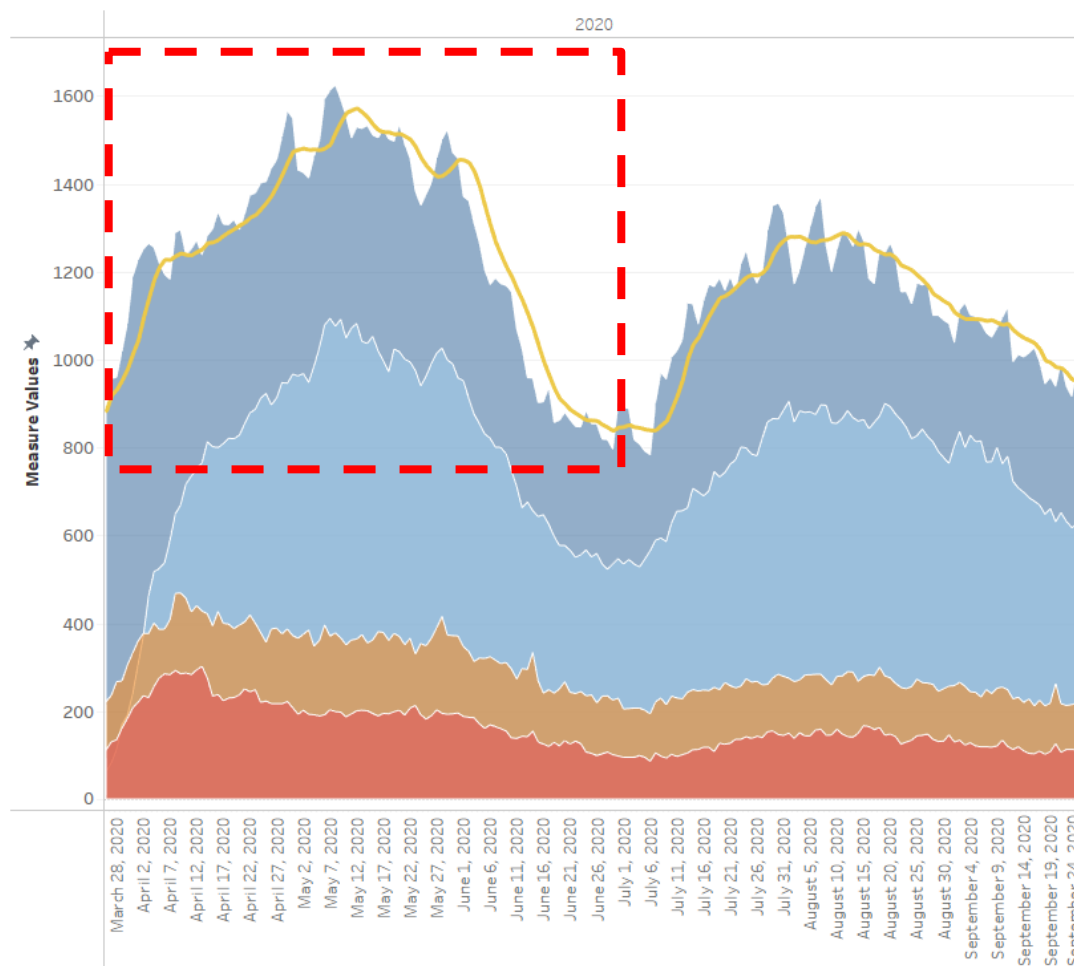
VHHA Discharge Data vs. VHASS Daily Data

COVID-19 VHASS Report - Hospitalization Trends

Report Created: 9/25/2020 4:51:16 AM (Updated Daily)

Virginia Healthcare Alerting Status System (VHASS) Confirmed Discharge Comparison

*8,080 total cumulative
COVID discharges reported
on June 30, 2020



COVID Hospitalizations by Race

April-June 2020

| Race Description | COVID Hospitalizations | % of COVID Hospitalizations | % of Total Hospitalizations |
|-----------------------|------------------------|-----------------------------|-----------------------------|
| American Indian | 13 | 0.15% | 0.15% |
| Asian | 380 | 4.36% | 2.80% |
| Black | 2,246 | 25.76% | 23.37% |
| Hispanic - Black | 10 | 0.11% | 0.08% |
| Hispanic - White | 833 | 9.55% | 1.87% |
| Other, Specified | 2,030 | 23.28% | 7.11% |
| Unknown, Not Recorded | 404 | 4.63% | 4.80% |
| White | 2,803 | 32.15% | 59.82% |

COVID Hospitalizations by Age and Sex

April-June 2020

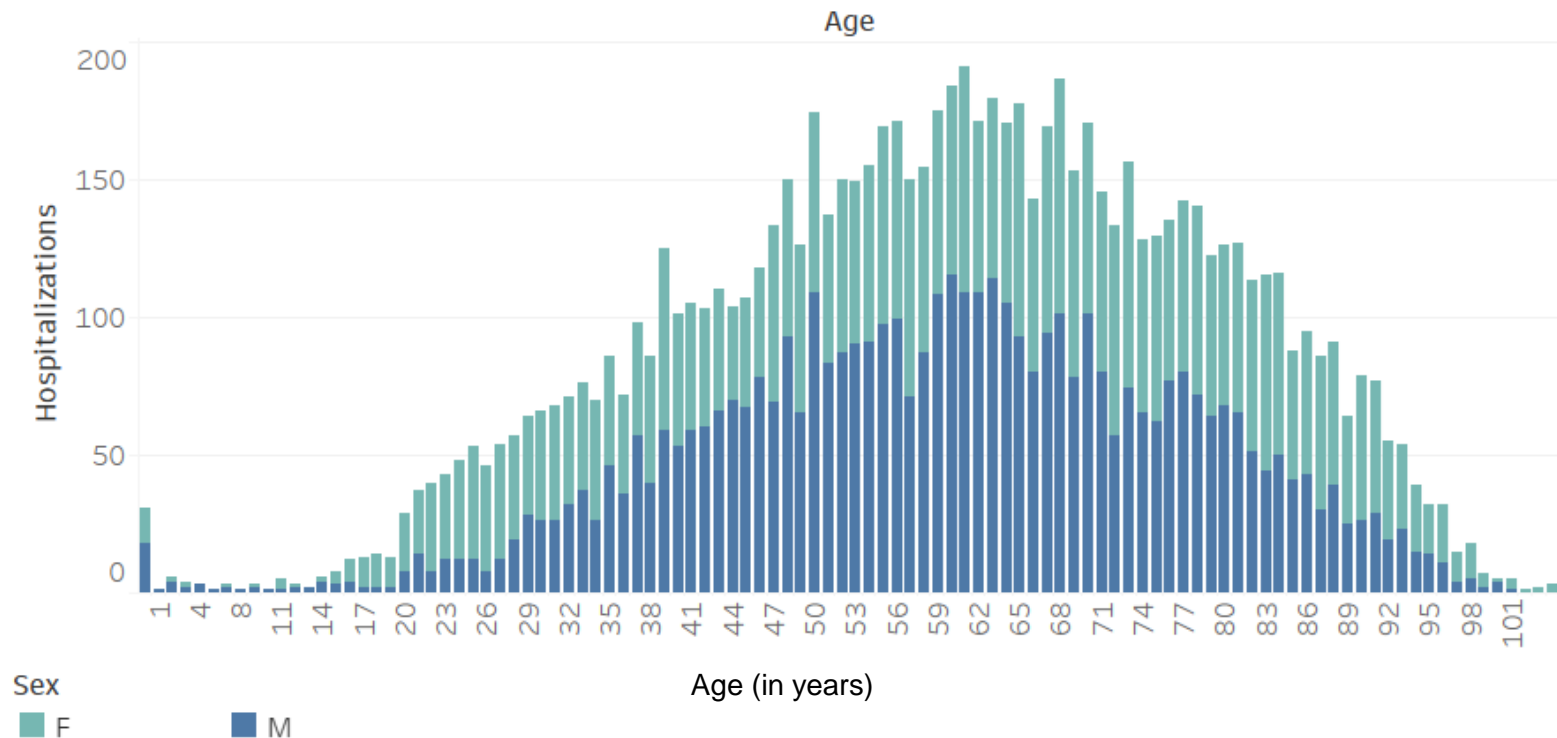
Average Age

68

Median Age

70

age distribution



COVID Hospitalizations by Payer Category

April-June 2020

| Payerdesc (group) | COVID Hospitalizations | % of COVID Hospitalizations | % of Total Hospitalizations |
|---|------------------------|-----------------------------|-----------------------------|
| Commercial | 3,129 | 35.9% | 34.72% |
| Medicaid | 850 | 9.7% | 19.73% |
| Medically Indigent/Free, Self Pay, Self-Insured | 821 | 9.4% | 4.46% |
| Medicare | 3,363 | 38.5% | 37.21% |
| Other_ | 542 | 6.2% | 3.74% |
| Worker's Comp | 23 | 0.3% | 0.14% |

COVID Hospitalizations by Length of Stay

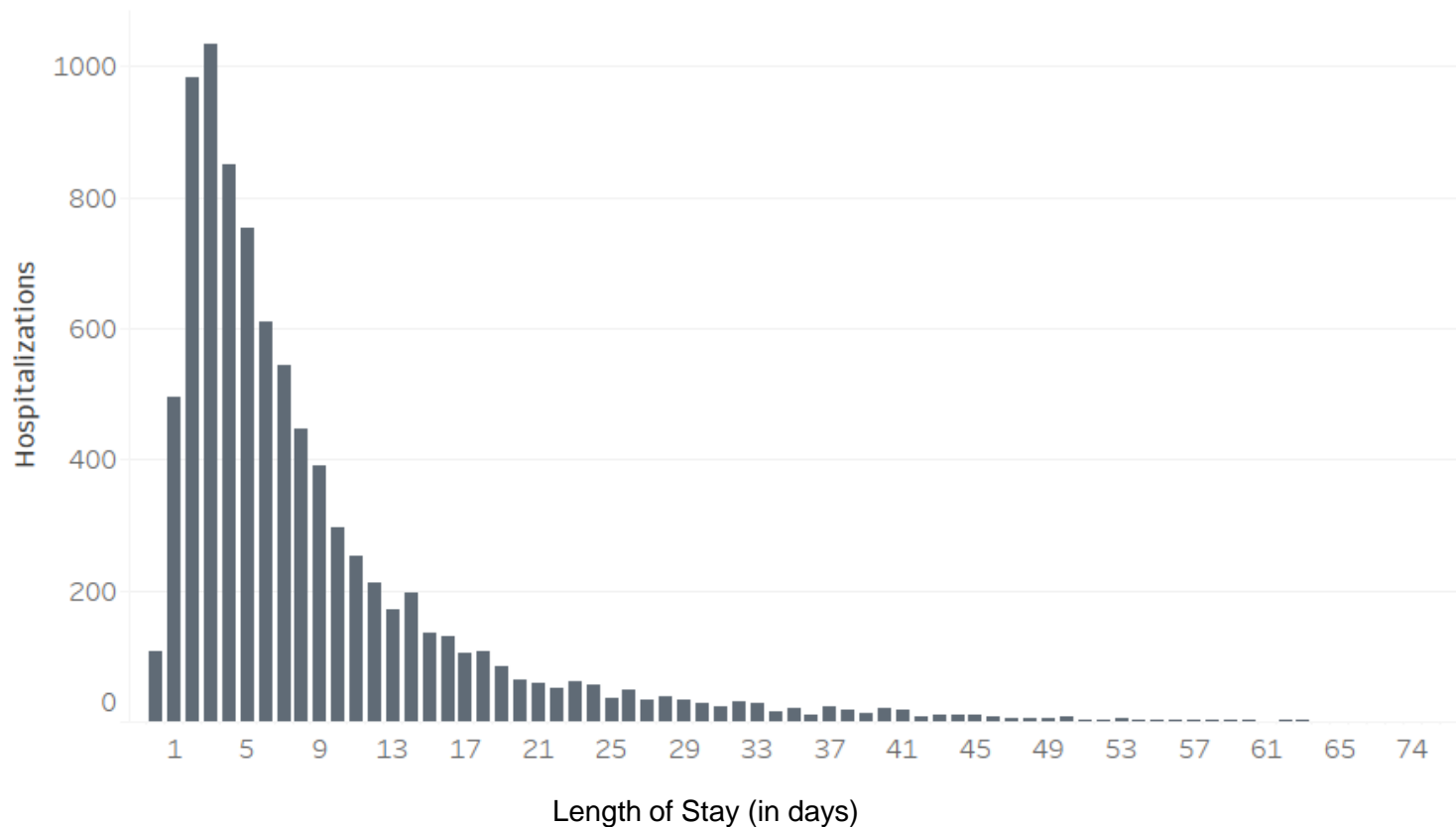
April-June 2020

LOS Average

13.92

LOS Median

10.00



COVID Hospitalizations by Discharge Disposition

April-June 2020

| Discharge Disposition Category | COVID Hospitalizations | % of Total * |
|---|------------------------|--------------|
| To Home or Self Care | 4,598 | 52.68% |
| Expired | 1,178 | 13.50% |
| To Home Under Care of Home Health Service Organization | 1,114 | 12.76% |
| Discharged/transferred to Skilled Nursing Facility | 778 | 8.91% |
| Hospice - Medical Facility | 302 | 3.46% |
| To a Short-Term General Hospital for Inpatient Care | 200 | 2.29% |
| Discharged/transferred to an Inpatient Rehabilitation Facility | 157 | 1.80% |
| Hospice - Home | 97 | 1.11% |
| Discharged/transferred to an Intermediate Care Facility | 94 | 1.08% |
| Discharged/transferred to Court/Law Enforcement | 58 | 0.66% |
| To a Medicare Certified Long Term Care Hospital | 53 | 0.61% |
| Discharged/transferred to another Type of Health Care Institution | 33 | 0.38% |
| Left Against Medical Advice or Discontinued Care | 32 | 0.37% |

*13/29 discharge disposition categories shown, displayed categories do not add up to 100%

COVID Hospitalizations with Chronic Condition(s) (CCW)

April-June 2020

| Chronic Condition | COVID Hospitalizations with CC Indicator | % of COVID Hospitalizations* |
|--|--|------------------------------|
| HYPERTENSION | 5,214 | 67.55% |
| CHRONIC KIDNEY DISEASE | 3,798 | 49.20% |
| HYPERLIPIDEMIA | 3,577 | 46.34% |
| DIABETES | 3,312 | 42.91% |
| ANEMIA | 2,282 | 29.56% |
| OBESITY | 2,145 | 27.79% |
| ISCHEMIC HEART DISEASE | 1,607 | 20.82% |
| ALZHEIMER'S DISEASE AND RELATED DISORDER.. | 1,334 | 17.28% |
| HEART FAILURE | 1,252 | 16.22% |
| ACQUIRED HYPOTHYROIDISM | 947 | 12.27% |
| ANXIETY DISORDERS | 945 | 12.24% |
| CHRONIC OBSTRUCTIVE PULMONARY DISEASE A.. | 911 | 11.80% |
| ASTHMA | 771 | 9.99% |
| DEPRESSION | 738 | 9.56% |
| RA/OA (RHEUMATOID ARTHRITIS/OSTEOARTHRI.. | 697 | 9.03% |
| DEPRESSIVE DISORDERS | 697 | 9.03% |
| BENIGN PROSTATIC HYPERPLASIA | 585 | 7.58% |
| FIBROMYALGIA CHRONIC PAIN AND FATIGUE | 524 | 6.79% |

*Only top ccw conditions shown, displayed categories do not add up to 100%

Chronic Conditions Warehouse (ccw) flag methodology: <https://www2.ccwdata.org/web/guest/home/>

Total Hospitalizations with Chronic Condition(s) (CCW)

April-June 2020

| Chronic Condition | Hospitalizations with CC indicator | % of total hospitalizations * |
|---|---------------------------------------|----------------------------------|
| HYPERTENSION | 86,943 | 63.43% |
| HYPERLIPIDEMIA | 58,079 | 42.38% |
| CHRONIC KIDNEY DISEASE | 50,650 | 36.95% |
| ANEMIA | 44,268 | 32.30% |
| DIABETES | 44,181 | 32.24% |
| ISCHEMIC HEART DISEASE | 34,436 | 25.12% |
| TOBACCO USE | 30,496 | 22.25% |
| HEART FAILURE | 29,582 | 21.58% |
| ANXIETY DISORDERS | 29,362 | 21.42% |
| OBESITY | 28,473 | 20.77% |
| DEPRESSION | 26,701 | 19.48% |
| DEPRESSIVE DISORDERS | 24,122 | 17.60% |
| CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND BRONCHIECT.. | 22,787 | 16.63% |
| ACQUIRED HYPOTHYROIDISM | 18,701 | 13.64% |
| RA/OA (RHEUMATOID ARTHRITIS/OSTEOARTHRITIS) | 17,218 | 12.56% |
| FIBROMYALGIA CHRONIC PAIN AND FATIGUE | 16,459 | 12.01% |
| DRUG USE DISORDERS | 13,652 | 9.96% |
| ALZHEIMER'S DISEASE AND RELATED DISORDERS OR SENILE DEM.. | 12,569 | 9.17% |
| ALCOHOL USE DISORDERS | 12,365 | 9.02% |

*Only top ccw conditions shown, displayed categories do not add up to 100%

Chronic Conditions Warehouse (ccw) flag methodology: <https://www2.ccwdata.org/web/guest/home/>



Thank You

For Questions
jtwalker@vhha.com

Although the Virginia Hospital & Healthcare Association (VHHA) attempts to provide the most timely and accurate data, VHHA makes no representation as to the accuracy or completeness of any data contained in this report. The information contained in this report is intended for informational purposes, but not as the sole basis upon which any specific action is to be recommended or undertaken. Furthermore, VHHA makes no warranty, including any warranty of accuracy, fitness for a particular use or other guarantee, express or implied, with regard to the data contained herein and assumes no liability for users' reliance upon or use of these data in any manner whatsoever.